CHILD'S PLAY: COMMUNITY SOLUTIONS FOR INCREASING YOUTH PHYSICAL ACTIVITY IN DISTINCT SAFETY CONTEXTS

by

Stephanie L. Phibbs

B.A., University of Redlands, CA, 1993

M.P.H., University of Nottingham, England, 1995

A thesis submitted to the

Faculty of the Graduate School of the

University of Colorado in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

Health and Behavioral Sciences Program

2013

© 2013

STEPHANIE L. PHIBBS

ALL RIGHTS RESERVED

This thesis for the Doctor of Philosophy degree by

Stephanie L. Phibbs

has been approved for the

Health and Behavioral Sciences Program

by

Deborah S. Main, Dissertation Chair

Ronica N. Rooks, Chair of Examination Committee

L. Miriam Dickinson

Richard Allen Miech

Jean N. Scandlyn

April 19, 2013

Phibbs, Stephanie, L. (Ph.D., Health and Behavioral Sciences)

Child's Play: Community Solutions for Increasing Youth Physical Activity in Distinct Safety Contexts

Thesis directed by Professor Deborah S. Main.

ABSTRACT

Amid the uniformly low physical activity rates among children in the United States, combined with epidemic rates of childhood obesity, practical solutions for increasing physical activity (PA) are needed. Whether interventions to increase PA need to account for individual demographic characteristics or safety context is unknown.

Methods:

Study Design: This community based participatory research project used mixed methods, including secondary data analyses and concept mapping.

Setting: Five demographically diverse, geographically contiguous, urban neighborhoods in Colorado, including one of the largest redevelopments in the United States designed for active living.

Measures: Secondary data identified neighborhood safety contexts. Concept mapping participants identified, sorted and rated interventions to increase youth PA.

Population: Participants were purposefully sampled households, including equal numbers of black, white and Latino adults from each safety context, and their 10-14 year-old children.

Analysis: Cluster analysis using measures of social cohesion, incivilities, discrimination, and fear of crime and traffic safety identified homogenous safety

subgroups. ANOVA, multivariable analyses and concept mapping pattern matching were used to compare ratings within and between safety contexts and demographic groups.

Results:

Cluster analyses identified three distinct safety contexts. Concept mapping elicited 330 ideas, 100 of which were randomly selected for participants to sort and rate. Three intervention groupings were identified: 1) activity interventions, 2) safety interventions, and 3) infrastructure/access interventions. Participants residing in less safe contexts, and black and Latino adults, rated all interventions as more needed than participants from the safest context and white adults. Adults residing in the safest context thought infrastructure/access interventions were most needed, while adults from less safe contexts rated safety interventions as most needed. Youth across all contexts thought safety interventions were least needed; activity and infrastructure/access interventions were rated as most needed. Community-led analyses identified that all youth across all contexts wanted fun, free and safe physical activity opportunities.

Discussion:

Safety context is an indicator of community need for youth physical activity interventions. Communities recommend framing and implementing interventions that are simultaneously fun, free and safe, rather than focusing exclusively on safety intervention needs that stigmatize neighborhoods. Top intervention needs are consistent with nationally recommended interventions and also suggest a role for grassroots participants.

The form and content of this abstract are approved. I recommend its publication.

Approved: Deborah S. Main

ACKNOWLEDGEMENTS

This project would not have been possible without the work and support of numerous people. Debbi Main took the initiative to start Taking Neighborhood Health to Heart, finding excellent community organizers such as Charlene Barrientos Ortiz, Patricia Iwataki Iwasaki and Alicia Brown to bring and keep community members together. The chair of Taking Neighborhood Health to Heart, George Ware, has dedicated countless hours to maintaining this CBPR effort through the years. The Society of the Youth, a working group of TNH2H, included beautiful people dedicating time each month making this dissertation part of a social change project, where research played one part. Adult leaders of that group included LaShonn Billingsley, Carmen Miranda, Francisco Subiadur, Olga Martinez, Cat Santos and Daniel Armijo. These adults were extremely generous, sharing so much to create a true community. Many youth brought fun and vitality to the group as well. Silvia Gutiérrez Raghunath, Rebecca Slaughter, Heather Kennedy, Nicole Tuitt, Ira Gorman, Rosario Montoya, Kate Walker and Samuel Wood all contributed significantly to various phases of the project. Thank you all!

My family has been incredibly supportive, really understanding and loving me even in my constant busyness, supporting me in believing that together we can make a difference. I am also very grateful for my supportive colleagues at Denver Health.

This study would not have been possible without the generous funding from the Active Living Research Program of The Robert Wood Johnson Foundation. Results would not have become actions without the funding of The Denver Foundation.

TABLE OF CONTENTS

CHAPTER

I. INTRODUCTION 1

Project Significance 8

Study Aims 10

II. LITERATURE AND THEORY REVIEW 11

Understanding Physical Activity among Youth through a Social Ecological Approach 11

Combining CBPR and Recommended Interventions for Action 14

Rationale for Safety Construct Selection 16

Understanding Racial and Ethnic Disparities 21

A View from a Broad Theoretical Lens 24

Chapter Summary 29

III. METHODOLOGY 30

Research Design 30

Research Setting 30

Aim 1 Methods. 32

Measures. 33

Cluster Analytic Methods Used to Identify Unique Safety Contexts. 34

Aim 2 Methods 35

Concept Mapping Sampling and Recruitment Methods. 36

Steps in Concept Mapping 37

Concept Mapping Data Analysis. 41

IV. RESULTS 44
Aim 1 Results 44
Aim 2 Results 46
CBPR and the Community-Advisory Counsel. 46
Concept Mapping Recruitment Efforts. 50
Participant-Suggested Interventions. 52
Concept Map of Suggested Interventions. 54
Multivariable Analyses to Evaluate How Ratings by Different Demographic Subgroups Vary within and between Safety Contexts. 58
Comparisons of Safety Intervention Needs. 59
Comparisons of Infrastructure/Access Intervention Needs. 60
Comparison of Activity Intervention Needs 61
Summary of Multivariable Analyses. 62
Concept Mapping Analyses. 62
Concept Maps by Context and Demographic Groups. 62
Comparing Intervention Needs among Adults within and between Safety Contexts 64
Comparing Intervention Needs among Youths within and between Safety Contexts. 67
Comparing Intervention Needs among Ethnic Groups within and between Safety Contexts. 70
Summary of Concept Mapping Need Analysis Comparisons. 76
Concept Mapping Adult Possibility Comparisons. 76

Community-Generated Analyses for Action 81

V. DISCUSSION 85

Review of Study Findings 85

Interpretation of Study Aim 1 Findings 88

Interpretation of Study Aim 2 Findings 91

Revised Socio-Ecological Framework 91

Perceived Needs Influenced by Individual Factors 95

CBPR as a Social Change Project 98

Correspondence of Study Intervention Recommendations with National Efforts 102

Reflections 107

Limitations 109

Limitations of Study Aim 1. 109

Limitations for Aim 2. 109

Conclusions and Implications for Future Research 112

REFERENCES 115

APPENDICES 134

1: Participant Recruitment Flyer 135

2: CAC Facilitation Training Materials 137

3: Brainstorming Protocol and Packet 153

4: Sorting Protocols 167

5: Rating Protocols 174

6: Community Fair Flyers 181

7: Comprehensive List of Intervention Suggestions 187

8: Pattern Match: Similar Ratings among Context 2 and Context 3 Adults 195

9: Community Feedback Presentation 197

10: Physical Education Policy Brief 208

LIST OF TABLES

TABLE

II.1 Recommendations for Combating Obesity. 15

II.2 Sample of Study Populations, Measures of Safety and Outcomes. 17

III.1 Socio-Demographic Characteristics of Catchment Area. 31

III.2 Summary of Clustering Variables. 34

III.3 Sampling Frame for Concept Mapping Efforts. 37

IV.1 Summary of Brainstorming and Sorting Phase Participants. 51

IV.2 Rating Participant Recruitment Effort. 52

IV.3 Summary of Rating Phase Study Participants. 52

IV.4 Summary of Safety-Related Interventions by Context. 53

IV.5 Statements Sorted into Three Intervention Clusters. 56

IV.6 Average Need for Safety Interventions by Safety Context. 59

IV.7 Mean Need for Safety Interventions. 60

IV.8 Mean Need for Infrastructure/Access Interventions. 61

IV.9 Mean Need for Activity Interventions. 61

IV.10 Go-Zone Ideas Listed in Order of Highest to Lowest Youth Needs. 83

IV.11 Go-Zone Ideas Listed in Categories of Fun, Free and Safe Needs. 84

V.1 Nationally Recommended Strategies for Youth Obesity Reduction. 103

V.2 Go-Zone Ideas Listed in Categories of Fun, Free and Safe Needs. 106

LIST OF FIGURES

FIGURE

II.1 Social Ecological Framework for Physical Activity Interventions. 11

II.2 Constructs Used in Cluster Analysis. 19

IV.1 Data from Three-Cluster Solution, with Data Normalized to 0-1 Scale. 45

IV.2 Point Map Resultant from Sorting Activity. 54

IV.3 Three Cluster Solution. 55

IV.4 Adult Rating of Relative Need for Different Intervention Clusters. 63

IV.5 Youth Rating of Relative Need for Different Intervention Clusters. 63

IV.6 Relative Need for Interventions by Adults in Context 1. 65

IV.7 Relative Need for Interventions by Adults in Contexts 2 and 3. 65

IV.8 Pattern Match of Adult Intervention Needs Context 1 v. Contexts 2 & 3. 67

IV.9 Relative Need for Interventions by Youth in Safest Context. 67

IV.10 Relative Need for Interventions by Youth in Second-Safest Context (Context 2). 68

IV.11 Relative Need for Interventions by Youth in Least Safe Context (Context 3) 68

IV.12 Pattern Match of Youth Intervention Needs Context 1 v. Contexts 2 & 3. 69

IV.13 Relative Intervention Needs for White Adults in Safest Context. 70

IV.14 Relative Intervention Needs for Latino Adults in Safest Context 70

IV.15 Relative Intervention Needs for Black Adults in Safest Context. 71

IV.16 Relative Intervention Needs for White Adults in Two Least Safe Contexts. 71

IV.17 Relative Intervention Needs for Black Adults in Two Least Safe Contexts. 72

IV.18 Relative Intervention Needs for Latino Adults in Two Least Safe Contexts. 72

IV.19 Pattern Match Comparing Latino (left) and Black (right) Adult Ranking of Intervention Needs. 73

IV.20 Pattern Match Comparing Latino (left) and White (right) Adult Ranking of Intervention Needs. 74

IV.21 Pattern Match Comparing Black (left) and White (right) Adult Ranking of Intervention Needs 75

IV.22 Relative Intervention Feasibility Rating Among All Adults. 77

IV.23 Relative Intervention Feasibility Rating Among All Youths. 77

IV.24 Relative Intervention Feasibility Rating Among All White Adults. 78

IV.25 Relative Intervention Feasibility Rating Among Black Adults. 78

IV.26 Relative Intervention Feasibility Rating Among Latino Adults. 79

IV.27 Relative Intervention Feasibility Rating Among Adults in the Safest Context. 80

IV.28 Relative Intervention Feasibility Rating Among Adults in the Second Safest Context. 80

IV.29 Relative Intervention Feasibility Rating Among Adults in the Least Safe Context. 81

IV.30 Go-Zones Examining What Youth Say is Needed and What Adults Say is Possible. 82

V.1 Social Ecological Framework for Physical Activity Interventions. 89

V.2 Revised Social Ecological Framework for Physical Activity Interventions. 93

LIST OF ABBREVIATIONS

ABBREVIATION	
BMI	Body Mass Index
BRFSS	Behavior Risk Factor Surveillance System
CAC	Community Advisory Council
CDC	Centers for Disease Control and Prevention
CBPR	Community-Based Participatory Research
MVPA	Moderate to Vigorous Physical Activity
NHANES	National Health and Nutrition Examination Survey
NHLBI	National Heart, Lung and Blood Institute
PA	Physical Activity
SAY	Shaping America's Youth
SES	Socio-Economic Status
SOY	The Society of the Youth
TNH2H	Taking Neighborhood Health to Heart

CHAPTER I

INTRODUCTION

Rising rates of obesity in our nation constitute a public health crisis.[1] Measured as ≥95% body mass index (BMI),[2-4] obesity rates increased between 1974 and 2004, doubling among children aged 6-11 and tripling among teens.[5] Most recent national data show 18.0% of children 6-11 years of age and 18.4% of children 12-19 years of age are obese, representing a recent leveling off in obesity rates.[6, 7] Including overweight and obese children, nearly one-third of youth nationally have a BMI ≥ 85%.[8] In Colorado, 27.3% of 5-17 year-olds have a BMI≥ 85%,[9] a figure that ranks the state as one of the leanest, though the disparity between non-Hispanic white and Hispanic rates of childhood obesity is among the highest.[10] Though BMI may not equate to the same level of body fat in all racial/ethnic groups,[11] corresponding national data show a persistent[12] disparity in obesity rates among 6-11 year old Hispanic, Mexican American and non-Hispanic black girls, when compared with non-Hispanic white girls.[6]

Overweight and obese children are more likely to become adults with costly[8] chronic health conditions such as cardiovascular disease, diabetes, and cancer with poorer health outcomes.[13, 14] Additionally, national costs of childhood obesity are estimated at $3 billion for children with Medicaid,[15] and two authors extrapolate that additional national medical health care expenditures for emergent, drug and outpatient visits associated with elevated BMI stands at $14.1 billion.[16]

While the direct linkage between obesity and physical activity is not as clear among youth as it is in adults,[17, 18] developing physical activity patterns early in life helps establish behaviors for later life, and improves a range of health outcomes such as aerobic

fitness, blood lipids, blood pressure, skeletal and psychological health.[19,20,21] The national recommendation is for youth to get 60 minutes of moderate physical activity every day. [22] National Healthy People 2020 goals call for improving adolescent physical activity levels 10%, and increasing the percentage of schools requiring daily physical education and recesses.[23]

So how much exercise are youth getting? In the Youth Risk Behavior Survey youth were asked to report their "physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes," i.e., moderate to vigorous physical activity (MVPA), 18.4% of high school students reported that they were active for one hour on all 7 days; 37% met the recommendation on 5 days; and 23.1% were not active any day in the 7 days preceding the survey.[24] These data also show boys are more active than girls, and activity rates decrease with age.[24] Recognizing the limitations of self-report data, the National Health and Nutrition Examination Survey (NHANES) survey, a nationally representative survey of youth 6-19 year olds, measured MVPA objectively using accelerometers.[25,26] In these 2003-2004 data, which measured whether children met national recommendations, 42% of children 6-11 years, 8.0% of youth 12-15, and 7.6% of 16-19 year olds met the national recommendation for physical activity, with large disparities between girls and boys under 16 years of age. In 2005-2006, children 6-11 years old were found to get on average 90.1 minutes MVPA/day and 12-19 year old youth averaged 29.3 minutes/day.[26] But, similar to the YRBS survey, males averaged more physical activity (PA) than females in both age groups. [26]

Findings regarding socio-economic, ethnic or racial disparities in physical activity among children are mixed. Earlier studies using self-report data indicated white children

had higher rates of MVPA compared to their Latino and black counterparts.[24] Yet, more objective accelerometer data call this disparity into question. NHANES data from 2003 and 2006, using accelerometers for the first time, showed non-Hispanic black youth have the highest levels of MVPA.[27] [26] [28] These same data showed no difference in activity levels among 6-15 year olds according to income.[27]

So what do we know about physical activity-related trends over time? Between 1999 and 2010, obesity rates among youth were leveling for all but adolescent boys.[7] Self-reported levels of moderate to vigorous physical activity among youth stabilized between 2003 and 2006[26] and the percentage of youth meeting national physical activity recommendations between 2005 and 2009 was unchanged.[29] A recent national telephone survey found that 7.1% of children 5-15 years old walk 30 minutes per day and 1.6% of children bike 30 minutes or more per day, representing a significant decrease in cycling compared to 2001.[30] Youth are spending more time with media, increasing from 6 hours and 19 minutes in 1999 to 7 hours and 38 minutes in 2009. [31] After an initial decrease in daily physical education between 1991 and 1995, [32] daily attendance rates have not decreased.[33] Together these data show physical activity levels have decreased since 1991, but, along with obesity rates, may be leveling out.

Another relevant question is what other variables are associated with physical activity (PA) in children? Researchers currently use a social ecological framework to organize the multiple influences on physical activity.[34] This framework recognizes that individual behaviors are embedded in a context that has multiple dimensions, including intrapersonal, interpersonal, institutional, community, and policy-related influences. In their extensive 2000 review, Sallis, Prochaska and Taylor found that correlates of

physical activity varied between children and adolescents.[21] Among children 6-11 years of age, time outdoors, program facility access, having an overweight parent, eating a healthy diet, participating in previous physical activity, preferring PA, intending to participate in PA, and being male, were consistently related to higher levels of physical activity. More variables were associated with PA among adolescents than among children, including: psychological (achievement orientation, depression, competence, intention), behavioral (community sports, previous PA), social cultural issues (parent support, direct help from parents, sibling PA), as well as opportunities to exercise, being male, younger age, and white, showing associations with physical activity.

Ding et al. [35] conducted a review of a database developed for Active Living Research, focusing on associations between the neighborhood environment and youth physical activity. They found that the most consistent environmental supports for children's (ages 6-11) physical activity were: neighborhood walkability, traffic speed/volume, access/proximity to recreation facilities, land-use mix and residential density. For adolescents the associations between environmental supports and physical activity were most consistent for land-use mix and residential density.

Individual factors related to obesity include: income,[36] genetics, knowledge regarding diet and physical activity, health status, psychology, self-efficacy,[37] and perceptions of obesity and healthy weight.[38, 39] Interpersonal factors include social support.[40] Broader environmental factors include opportunities for physical activity or sedentary behavior such as school physical activity,[41, 42] social and economic systems in which these behaviors take place,[8] and the more global social norms and cultural concordance with intervention messages.[43-47]

Based on the vast amounts of active living[35] and related research, the IOM,[8] Healthy People 2020,[23] The Robert Wood Johnson Foundation[48], the Centers for Disease Control and Prevention (CDC)[49] and others[50] have recommended environmental changes, strategies and policy interventions for improving physical activity levels among youth.[51] Yet, the question remains: which of these suggested interventions would be considered useful by the target communities? Do interventions need to be tailored for specific ethnic groups as some authors suggest?[52] Might some interventions be more efficacious in some, but not other environments? How can unintended consequences of interventions be avoided?

Although research can inform policy and environmental changes, sustainable interventions to improve physical activity benefit from engaging the target communities themselves to take ownership of the solutions.[53, 54] Intervention areas that the community might suggest could fall anywhere within the social-ecological framework.[46, 55-63] The need for community engagement is made clearer as more research has shifted its focus on examining the effects of the physical and social context on physical activity among ethnically diverse youth in lower income neighborhoods. In fact, in its most recent report, the IOM has said:

> It is important to recognize as well that not all individuals, families, and communities are similarly situated. In many parts of the United States, low-income individuals and families live, learn, work, and play in neighborhoods that lack sufficient health-protective resources such as parks and open space, grocery stores, walkable streets, and high-quality schools. In any given community, the relative mix of community-level resources and risk factors is determined primarily through democratic local and regional decision-making processes; consequently, organized participation in these processes influences where these community resources and risks are located. Because of such factors as poverty, language barriers, and immigration status, low-income, minority, and other disadvantaged population groups

> often are underrepresented and their concerns marginalized in these decision-making processes. These groups are therefore less likely to benefit from access to health-protective resources. To change this situation, robust and long-term community engagement and civic participation among these disadvantaged populations become essential. [8, pg.7]

Amid the various correlates of physical activity, communities and public health entities agree safety is a barrier to physical activity,[64, 65 66, 67] especially in urban contexts.[64, 65] For instance, parental concerns about traffic safety can keep youth from walking to school.[66, 67] As the Institute of Medicine states, "Local governments, in partnership with private developers and community groups, should ensure that every neighborhood has safe and well-designed recreational facilities and other places for physical activity for children and youth."[46, p.211] Improving neighborhood safety may lead to more outdoor time and less sedentary behaviors that place children at risk for obesity,[68, 69] such as watching television or videos, using computers and/or playing video and other electronic games.[70, 71] Indeed, intervention studies have shown safe spaces may encourage higher activity levels.[72]

The qualities that confer a sense of safety and support physical activity, however, are not clear. Perceptions of safety and neighborhood attractiveness have been shown to differ among racial, [*73, 74] gender,[75] ethnic and economic groups.[76-78] Authors of one review concluded there is insufficient evidence linking crime-related safety and adult physical activity.[79] Neighborhood incivilities and hazards, an objective measure of the physical environment including graffiti and trash, are thought to signal feelings of being

[*] Note the term "Race" is used throughout with the understanding this is a socially constructed category, consistent with statements from anthropological associations referenced here.

unsafe,[80] yet in one study *more* hazards were correlated with *increased* levels of youth physical activity.[81] Also, children from lower economic groups are more likely to walk to school than their more affluent counterparts,[82] despite the fact that these lower socioeconomic environments are associated with more crime, which is also associated with feeling unsafe.[76]

Safety concerns are not limited to fear of crime but can also include objective and perceptual measures of traffic, lighting, loose dogs, strangers and sidewalk maintenance.[47, 76] Aspects of the social environment, such as collective efficacy and social cohesion are also related to safety[83, 84] and to obesity.[85] Taken together, the association between physical activity and safety has been inconsistent, with some studies showing positive, [69, 71, 86-90] some negative,[86] and some insignificant[81, 91-95] correlations. These inconsistencies point possibly to the different measures,[96,76] or analytic methods used,[79, 86] but also suggest the unique ways social and physical environments interact to influence physical activity. Whether interventions need to be tailored to specific safety environments is not known.

For example, might interventions to improve safety actually impede informal social control and social cohesion?[84] Specifically, the intervention often brought to violent situations is increased policing, which may unintentionally reduce *informal* social control, the thing most needed.[97] As one concept mapping project has shown, a barrier to physical activity may include police "misjudge[ing] black men outside- assum[ing] they are getting into trouble… [and] people are arrested when playing outside." [98, p.292] Thus, increasing police presence may have the unintended consequence of decreasing a community's sense of safety and their physical activity.

Therefore, it is not clear whether interventions need to be tailored for different safety contexts, and whether such tailored interventions would be related to safety or to other components of the social ecological model. To understand whether and how interventions to increase physical activity might need to be tailored for distinct safety conditions, this study uses extensive secondary data, and concept mapping with parents and middle-school-aged children from different safety contexts to identify contextually relevant solutions for increasing physical activity among youth.

Project Significance

The significance of this project lies in its engagement of community stakeholders in a unique socio-ecological context. In 2006, a grant funded by the National Heart, Lung and Blood Institute (NHLBI) funded the initiation of a community-based participatory research (CBPR) project, named Taking Neighborhood Health to Heart. Taking Neighborhood Health to Heart (TNH2H) formalized a CBPR process and collected observational data to understand the influence of the built and social environments on health and health disparities in five distinct, geographically contiguous neighborhoods in urban areas of Colorado.[99] The setting is unique because it includes Stapleton, one of the largest urban renewal projects in the United States, which was designed especially for active living, including green space, pocket parks, walking and bicycling trails, wide sidewalks and recreation amenities. Beginning in 2001, this redevelopment replaced the former Denver airport and its associated noise, traffic and air pollution which had impacted four adjacent neighborhoods: Northeast Park Hill, Greater Park Hill, East Montclair, and Original Aurora. [99]

While the initial NHLBI study focused on adult health, TNH2H members also expressed interest in youth issues and agreed to participate in this research project to learn what interventions are appropriate for increasing youth physical activity. Thus the groundwork established in TNH2H provided the relationships and basic framework for forming a TNH2H sub-committee called The Society of the Youth. With The Society of the Youth, we explored whether as hypothesized, participants in less safe neighborhoods would suggest interventions to accommodate the safety environment, and if so, we wanted to know what types of interventions would be appropriate. The study also compared how different "racial" and ethnic groups within the same safety context rate the same intervention recommendations to see if different groups have different perceptions of what is needed.

Combining the grassroots support for this study from TNH2H and the favorable policy climate related to physical activity, results of this study could be translated to action. There is great political support at the national, state and local levels for increasing physical activity. Additionally, among all 50 states, Colorado has passed the largest percentage of introduced bills regarding childhood obesity prevention.[100] Also, the Colorado Society for Public Health Education and Colorado Public Health Association work together with their lobbyist and other public health organizations to advocate for relevant policy changes. This confluence of grassroots and political support for improving environments to support physical activity seemed timely for achieving the following study aims.

Study Aims

Aim 1: **Identify homogenous block group clusters by known physical and social correlates/measures of safety, including: fear of crime, traffic safety, social cohesion, discrimination and incivilities.**

Aim 2: **Within a community-based participatory research context, use concept mapping methodologies to examine how *solutions* for increasing pediatric physical activity vary within and between different safety contexts.**

H01: People in environments defined as being safe, having high levels of perceived safety and social cohesion and low measures of incivilities and discrimination will offer more solutions for increasing physical activity that are unrelated to the safety environment.

H02: Ratings of solutions suggested by different demographic subgroups within safety environments will be more similar than the ratings of solutions offered between different safety environments.

CHAPTER II

LITERATURE AND THEORY REVIEW

Understanding Physical Activity among Youth through a Social Ecological Approach

Understanding the childhood obesity epidemic in the United States -- and the role that physical activity plays-- requires a social-ecological perspective that recognizes the multi-level influences on human behavior; a model that has been extensively used and lends well to environmental and policy interventions.[34, 56, 101] For the current research study, these concepts are integrated into the social ecological framework adapted from Elder et al. 2007, Figure I.1.[102]

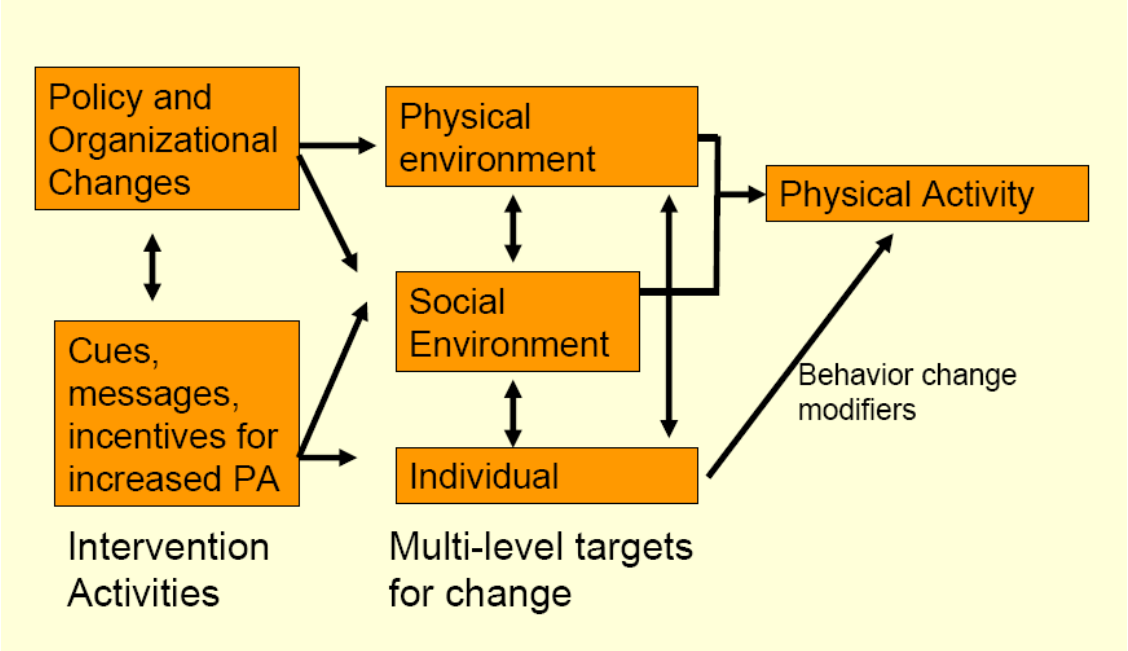


Figure II.1 Social Ecological Framework for Physical Activity Interventions.

The multi-level targets for change in the middle section of the diagram suggest that individual attributes, such as race or ethnicity, gender, age and socio-economic

status, might influence physical activity. The model also shows that the social and physical environment can influence physical activity. Noticeably, these three domains can influence one another, e.g., individuals can shape social and physical environments and these environments can also impact individuals. Lastly, the model demonstrates that interventions to impact physical activity can be in the form of policy and organizational changes that impact the environment, while cues, messages and incentives can impact the environment and individuals directly.

Related to this framework, the first aim of this study identifies safety contexts from secondary data by combining social and environmental variables. The second aim of this study includes using concept mapping methods, a multi-step process where residents from the different safety contexts suggest, sort and rate interventions for improving physical activity among youth. Together, the two aims of this study allow for a deeper exploration of the relative influence of individual and environmental attributes on individuals' perceived needs for interventions relevant to youth physical activity.

The current study is consistent with a growing body of research showing the influence of what is termed the "built" or "physical environment" on health, and specifically, on physical activity.[21, 103-105] The built environment has been defined as "the neighborhoods, roads, buildings, food sources, and recreational facilities in which people live, work, are educated, eat, and play,"[106, p.90] For instance, research has shown that children and adolescents with access to recreation centers and amenities for physical activity near their homes were more active than same-aged youth without such access.[95] Although not uniformly true, [107] some researchers have shown there are unfortunately fewer parks, athletic fields and trails in low-income neighborhoods, and this unequal

access has been related to lower levels of physical activity and increased rates of overweight among youth of color living in lower socio-economic status (SES) communities.[108-111] Relevant interventions to address these disparities elicited in concept mapping groups might include construction of walking or bike trails that reduce barriers related to cost, convenience, and accessibility,[112, 113] interventions particularly effective among less active populations.[114] Other interventions focusing on designing built environments to promote more active lifestyles, healthy eating, and social interactions and to reduce substance abuse and violence may also be pertinent to the communities included in the present research study.[115]

In addition to individual factors and the physical environment, the social environment also influences physical activity. The social environment includes cultural and social influences that shape how people view their environments and their relation to physical activity. Physical activity "is inherently shaped by one's social environment in that most activity occurs within the bounds of families, communities and neighborhoods."[116, p.1012] [117] Clearly, advising individuals to be more physically active without considering social norms for activity, resources and opportunities for engaging in physical activity, and environmental constraints, is unlikely to produce behavior change. Other research has confirmed this by showing that access to safe and appealing, proximate spaces and facilities encouraged higher levels of walking.[72] [62]

By using the social ecological framework for this study, I recognize how solutions for increasing physical activity may fall within any of these levels of the social ecological framework.

Combining CBPR and Recommended Interventions for Action

This dissertation research adopted a community-based participatory research (CBPR) approach, extending an existing CBPR process formed for a National Heart Lung and Blood Institute study involving community members from five demographically diverse neighborhoods. When done well, CBPR involves all partners equitably in a topic that is important to the community and combines knowledge and action to achieve social changes to improve health and eliminate disparities.[118, 119] This project is a logical extension of the group's progress, building on recent reports of neighborhood-level health data, moving towards action.

While engaging community residents in CBPR, it is important to simultaneously consider evidence related to effective physical activity interventions. Community suggestions supported by the literature can be forwarded to policy-makers with information about the evidence base. Community solutions unique from the literature can suggest other avenues of research or intervention. Environmental and policy interventions thought to disrupt the obesogenic environment (and the strength of evidence for that intervention) were summarized by Brownson, Haire-Joshu and Luke (2006)[50] as: 1) access to facilities (strong evidence, e.g., fitness centers, walking, biking trails), 2) urban planning and policy (sufficient evidence, e.g., zoning regulations, street lighting and sidewalk continuity), 3) transportation policy (insufficient evidence), 4) school-based physical education (strong evidence, e.g., lengthening classes or encouraging more activity in a given period has been shown to increase physical activity), 5) economic incentives (promising evidence, e.g., making funding available for community improvements, giving employees cash for not using parking), and 6) points of decision

prompts (sufficient evidence, e.g., signs on elevators to encourage people to use stairs or exercise messages).[50, 120] Kumanyika et al. (2008) [121] further describe possible environmental and policy interventions. Another study has shown that providing children access to a supervised and safe afterschool space to play outdoors can increase physical activity.[71]

Local and informal policies and interventions that may be relevant to this issue have also been summarized by the Robert Wood Johnson Foundation in its publication, *F as in Fat*, [48] with their suggestions shown in Table II.1. These recommendations could correspond with interventions suggested by the community, and can be used as a reference for policy briefs. The Robert Wood Johnson Foundation (RWJF) funded the *F as in Fat* study, demonstrating their interest especially in creating policy interventions. Together, CBPR methods and awareness of evidence-based interventions provide a strong foundation for policy and other intervention changes.

Table II.1 Recommendations for Combating Obesity.

"The F as in Fat report concludes with a recommendation that the country set a national goal of reversing the childhood obesity epidemic by 2015. Some key policy recommendations include:

- Investing in effective community-based disease-prevention programs that promote increased physical activity and good nutrition;
- Increasing the amount and quality of physical education and activity in schools and childcare programs;
- Increasing access to safe, accessible places for physical activity in communities. Examples include creating and maintaining parks, sidewalks and bike lanes and providing incentives for smart growth designs that make communities more livable and walkable;
- Encouraging limits on screen time for children through school-based curricula and media literacy resources;
- Providing people with the information they need about nutrition and activity to make educated decisions, including point-of-purchase information about the nutrition and calorie content of foods." [48]

Similarly the recent IOM report, Accelerating Progress in Obesity Prevention, recognizes the multi-level interventions needed to address obesity rates at a population

level and suggests the following physical activity (PA) interventions: Strategy 1-1: improving the physical and built environment, and Strategy 1-2: providing and supporting community programs to increase physical activity. The IOM further recommends Strategy 5-1: requiring quality PE and other physical activity opportunities in schools.[8]

Rationale for Safety Construct Selection

Because the central goal in this study is to learn whether interventions to increase physical activity need to be tailored to the safety context, I next review literature regarding the conceptualization of safety and its relation to physical activity. Safety is thought to figure into the decision of whether care-takers allow children to play outside or walk to school, with unsafe environments leading to more obesity-related behaviors, ones that are more prevalent among ethnic minority or low income youth.[22, 93, 122] While this trail of logic makes intuitive sense, the relationship between safety and physical activity is more complex.

First, the construct of safety is conceptualized and measured in very different ways in the empirical literature. Safety can be measured from a single question, such as the question from the Behavior Risk Factor Surveillance System (BRFSS) that asks, "How safe from crime do you consider your neighborhood to be?"[78] Romero et al. (2001) used a neighborhood hazards scale to determine the problem-level that traffic, trash, litter, crime, noise, gangs, prejudice, drugs and park access posed to neighborhoods.[81] Burdette and Whitaker (2005) used a similar scale to measure social disorder defined as loitering, gang activity, drug dealers, disorderly behavior.[93] Weir, Etelson and Brand (2006) used a scale that asks parents about their level of anxiety

concerning gangs, child aggression, crime, traffic and personal safety.[123] Fish et al. used a single question to inquire about direct experiences of crime. [86] All but the BRFSS and Fish studies used scales to measure hazards and incivilities.

Perhaps owing to these different approaches to measuring safety or perhaps because different subpopulations' perception of safety varies, studies present inconsistent associations between physical activity and safety (Table II.2). Data from the BRFSS survey show that physical activity is lower in adult populations that report being less safe.[78] Yet, in Burdette and Whitaker's study, safety and obesity were not associated among 3-year olds, but parents of these three year olds were more likely to be obese if they were in a less safe environment. One author has noted that the association between environmental "hazards" and physical activity found in two studies of middle class primarily European American populations, was contradicted in his study including largely lower income Mexican and Vietnamese populations in the U.S., where *more hazards* were related to *more physical activity*.[81]

Table II.2 Sample of Study Populations, Measures of Safety and Outcomes.

Study	Population; study design	Measure of Safety	Outcome
Centers for Disease Control, 1999 [78]	Representative adult sample; cross-sectional	Behavioral Risk Factor Surveillance System (BRFSS), How safe from crime do you consider your neighborhood to be?	Safety related to report of physical activity in last month
Romero et al, 2001 [81]	Fourth-grade students from diverse economic and ethnic backgrounds in Arizona; cross-sectional	Neighborhood Hazards, a 3-point Likert rating of how big of a problem the following eight items are in your neighborhood: traffic, trash and litter, crime, too much noise, gangs, lack of access to parks, prejudice, and drugs; adapted scale with alpha=0.76	Contrary to expectations, increased hazards were associated with increased self-reported rates of PA measured with the adapted Self-administered Physical Activity Checklist
Burdette	Three-year old children	Neighborhood Environment	No association between

Study	Population; study design	Measure of Safety	Outcome
and Whitaker, 2005 [93]	part of the Fragile Families and Child Wellbeing Study from 20 large US cities in 15 states; cross-sectional	for Children Rating Scale, contains eight items designed to measure *social disorder* asked if they saw events such as loitering, gang activity, drunks or drug dealers hanging around, disorderly or misbehavior youths or adults.	safety and time spent outdoors or BMI >95th percentile in 3-year old children.
Burdette, Wadden, Whitaker, 2006 [92]	Mothers three years post-partum, part of the Fragile Families and Child Wellbeing Study from 20 large US cities in 15 states; cross-sectional	Neighborhood Environment for Children Rating Scales (see above)	BMI related to safety measures, but not to measures of collective efficacy
Kelly, et al., 2007 [98]	Seventy-four African American community members participating in concept mapping; qualitative study	Inductive coding and labeling of data from qualitative methods	Barriers to PA different for high and low income AA participants, safety concerns included concerns about crime and police mistreatment
Weir, Etelson, Brand, 2006 [123]	Parents of children 5-10 years of age from suburban and inner-city neighborhoods; cross-sectional	Level of anxiety concerning gangs, child aggression, crime, traffic, and personal safety in their neighborhood	Inner-city children engaged in less physical activity and had parents who had more safety concerns
Fish et al., 2010 [86]	Random, stratified sample of adults living in 65 census tracts in Los Angeles County; cross-sectional	Collective efficacy and household crime, i.e., while in the neighborhood whether the respondent or anyone in their household had anything stolen or damaged inside or outside	Ordinary least squares analysis showed no association of BMI with safety, while instrumental variable analysis did show an association

These seemingly inconsistent associations between safety and physical activity in different studies may, in part, be due to the incomplete conceptualization of safety. The present study builds from these methods by combining multiple constructs associated with safety. A summary of the safety constructs included in the cluster analysis to define safety contexts in this study is shown in Figure II.1. The exact measures used for these

constructs are described in the methods section, and a rationale for including social cohesion and discrimination constructs follows.

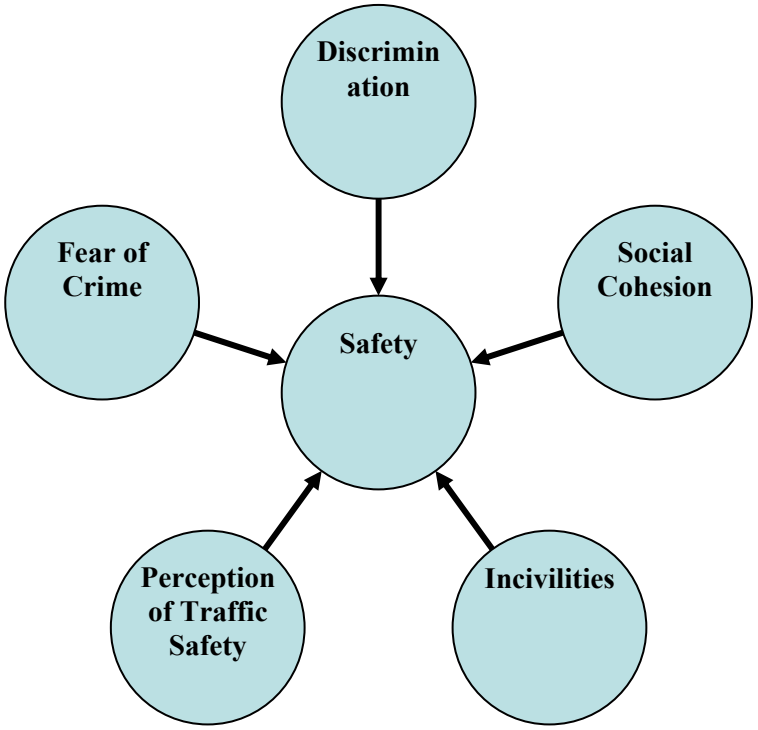


Figure II.2 Constructs Used in Cluster Analysis.

Collective efficacy is described as *"mutual trust and the willingness to intervene for the common good"* [84, p.919] or as *"the norms and networks that enable collective action."* [85, p.770] Collective efficacy is strongly associated with neighborhood violence, with authors explaining that collective efficacy is a method of guaranteeing shared norms and exerting social control within the community.[84] This reasoning suggests that a relationship between safety and physical activity may be mediated by collective efficacy.[97] Yet, research examining the relationship between collective efficacy and obesity has resulted in mixed findings. For instance, BMI among adults was not

associated with collective efficacy in one study,[92] but collective efficacy *was* associated with obesity in one study of adolescents.[85] Collective efficacy is measured using a scale by Sampson et al., [84 92, 124] that includes subscales of informal social control and social cohesion. Whereas informal social controls asks if neighbors would intervene in the cases of children skipping school, spray-painting, fighting, etc., social cohesion and trust measures whether people help, trust and get along with one another.[84] The secondary data source provided the social cohesion subscale of collective efficacy, so I included this construct in the cluster analysis.

Another construct that may be associated with feelings of safety is discrimination. Concept mapping findings from at least one African American community showed that police interventions that are often meant to increase safety may instead lead people to feel less safe and to a decrease in physical activity.[98] Thus, an intervention such as policing may engender a sense of safety for some people, but may contribute to fear among other people.[97] Romero et al., 2001 [81]similarly included prejudice in his neighborhood hazards scale. Including discrimination in the cluster analysis allows for different solutions that may implicitly or explicitly address this issue. The discrimination measure I used asked whether people have ever experienced discrimination from the police or in the courts, or on the street or in a public settings.[125]

Within this section I have described how safety is a complex concept and that the linkage between safety and physical activity is inconsistent. The various correlates of safety used in other studies provide a rationale for including perceptual and objective measures of safety, as well as social cohesion and discrimination in the cluster analysis to

identify distinct safety contexts within the catchment area, which is the first Aim of this study.

Understanding Racial and Ethnic Disparities

Previous sections in this chapter have described the multi-level influences on physical activity, and suggested safety is a complex construct with a complex relationship to physical activity. Researchers often describes disparities by racial/ethnic group,[126] but less research has described health disparities by safety context. By purposefully sampling different ethnic or "racial" groups within each of the safety contexts, this study helps disentangle race/ethnicity from safety context, to look more closely at a potential mechanism behind racial/ethnic disparities.

Disparities research is founded on various theories explaining the relationship between social inequality and disease. The Black Report describes four possible theoretical explanations for inequalities: "the artifact explanation (a problem of measurement), theories of natural or social selection (sick people become poor), cultural/behavioral theories (poor people have poor health habits), and material/structural factors aka social causation (life circumstances associated with poverty make people more vulnerable to disease)." [127] [128, p.780] Additional, but related, theories of health disparities at an ecological level include one proposed by LaVeist (2005), who posits that racial segregation influences health through 1) the relatively higher prevalence of social and environmental health risks and 2) through resource deprivation.[†] Schultz and

---

[†] Other disparity theories focus at other levels of the socio-ecological model, such as the psychosocial and behavioral theories (weathering hypothesis, John Henryism, Immigration and Acculturation, Racial Discrimination [biopsychosocial model] and the individual biogenetic and physical theories of disparities [biological differences among

Mullings (2006) note a number of critical theoretical approaches to health disparities, including the ecological model, social capital, community-based participatory research and social justice, while at the same time making a case for the use of intersectional theory, "developed most prominently by black feminist social scientists emphasizing the simultaneous production of race, class and gender inequality such that in any given situation, the unique contribution of one factor might be difficult to measure." [129, p.5]

As an example of this intersectional effect, Kumanyika (2008) noted how differences in obesity rates among children could be related to differences in "food-related beliefs, preferences and behaviors …and should not be studied in isolation [of] demographic, socio-structural, and environmental variables."[130, p.61] The author notes that the ethnic and racial differences in obesity rates may be manifested through numerous pathways, including high rates of maternal diabetes in pregnancy, parental attitudes and practices related to overfeeding children, over-eating of high calorie foods and inadequate physical activity. Environmental variables include lower than average availability of healthy foods, and higher than average availability of fast food, and marketing efforts that target these specific social and cultural groups.[131] Kumanyinka, for one, recognizes the interwoven nature of cultural and contextual factors that influence behaviors associated with "racial" and ethnic disparities in obesity rates.[130]

Intersectional theory is also supported by research showing that the physical body actually represents the "manifestations of troubles in the social body such as racism, sexism and classism."[132, p. 239-240] In this analysis, researchers hypothesize that

---

groups, biogenetic-environmental interactions, and the slavery hypertension hypothesis [disproven]])

overeating may be used as a coping mechanism to deal with multiple forms of oppression, or a way of countering white conceptions of beauty.[132 133] Indeed black and white women hold different conceptions of ideal body images, with black women reporting more satisfaction with their weight and overall appearance than white women.[132] Black women also self-report less negative pressure when obese, so some authors propose that weight reduction and maintenance efforts may less interesting to black women.[132 134] Thus, producing the same behavior change in black and white women might require tailored interventions.

The above research and theory, in addition to others[129, 135-138] supports the idea posited by Frohlich, Corin and Potvin (2001), who argue the associations between social factors and health outcomes are more complex than the simple principles derived from social epidemiology.[128] While social ecological models have taken a step forward to help researchers consider the ways in which the environment impacts individual behaviors, these environmental variables still do not describe how or why the environment functions to impact an outcome,[128, 139] and therefore have limited ability to inform effective interventions. More in-depth work by authors noted above and Dressler et al. suggests that approaching culture through its complexities, and thus at a deeper level, may help overcome the limitations of social epidemiology because; if we understand the culture, the mechanisms linking culture and health can be better understood.[140, 141] "Race" and/or ethnicity in this study is understood as a variable associated with a host of different experiences, beliefs and perceptions in line with the theories described above.

A View from a Broad Theoretical Lens

In addition to the discussion above, it is also beneficial to take a step back in order to view the association between safety, physical activity and racial/ethnic disparities and the role of CBPR in this study from a broader theoretical lens. In particular, theory from Pierre Bourdieu, is helpful in understanding the complex, multi-factorial relationships that may help explain physical activity in pediatric populations. Theory from Paulo Friere and Jürgen Habermas provide a lens for understanding the role of CBPR in this study.

Bourdieu's concepts provide a framework for understanding how different views and behaviors are constituted by different groups within a society. Bourdieu defines the social space in which we live as *the field.* This field can be visualized as a grid composed of an x and y axis. The grid is the social space characterized by different types of "capital," the x and y axes of the grid. The types of capital that create the field depend on what type of capital is associated with power in a specific system.[142] For most industrialized countries, Bourdieu noted economic capital and cultural capital (e.g., competencies, skills, and qualifications) were the forms of capital most relevant in forming the social space, or *field*. For example, a doctor likely has higher levels of both cultural and economic capital compared to someone like a health clinic clerk, owing to differences in educational and economic resources. These individuals inhabit different areas of the field or social space and a particular space on the field is termed a *habitus*. [143] In Bourdieu's description, a *habitus* is associated with a number of different "tastes"[143] as well as a certain *doxa*, "the pre-reflexive, shared but unquestioned opinions and

perceptions … the apparently natural beliefs or opinions that are intimately linked to *field* and *habitus*."[144, p.120]

Viewed from this theoretical vantage point, different communities inhabit different areas of the social space. People in these spaces have particular behaviors, beliefs and ways of understanding the way things are. For example, one community may have facilities and resources afforded to it by economic capital that are unavailable to other communities, which influences tastes and behaviors. In terms of physical activity, people from different habitus position themselves on a social field as they participate, or choose not to participate, in different activities. Playing polo would be an extreme marker of very high economic status and capital compared to basketball, which confers status for adolescent urban males especially in African American communities. Within each habitus different activities confer different levels of status. In similar ways, these contexts reproduce different perceptions and practices, including what would be considered a "safe" environment, and also how exercise would be perceived.[145,146]

Bourdieu's concept of habitus also provides a way to view the measures used in this dissertation study. In the work of Sampson, Raudenbush and Earls (1997), social cohesion plus a measure called "informal social control" form a concept called "collective efficacy." Sampson defines collective efficacy as "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good."[84, p.19] At face value, Sampson's definition suggests that increasing collective efficacy will decrease neighborhood violence. While this might be true, it is important to note that the questions used in Sampson's measure are rooted in a certain *doxa* with its associated norms and values as defined by Bourdieu. Sampson's measure emanates from

a positive conceptualization of "social cohesion" and a specific assumption of which behaviors should receive social control. In Sampson's work, collective efficacy (and the subscale social cohesion) is only associated with "positive" outcomes, namely, reduced violence.[84] Rather than being a measure of social cohesion, that is either positive or negative, I argue that Sampson's model actually measures the concordance of a community with a certain *doxa, a doxa that contains certain norms:* shared values, trust, getting along, being close-knit, being able to help their neighbors, controlling children who skip school, spray paint, or disrespect adults and care about fire stations' closing.

This measure is not necessarily the same measure that someone from a different *habitus* would use to measure informal social control. For instance, the character Cesar, a drug dealer, in Bourgois's book, In Search of Respect, [147] might view someone interrupting a child painting graffiti as something that disrupts Cesar's informal social control of the neighborhood. Sally Engle Merry suggests interpersonal violence may be a form of informal social control, adapted for an economically poor, culturally diverse environment she researched. [148] Thus, Sampson's measure of collective efficacy is collective efficacy embedded within a certain *habitus*. The measure of social cohesion used in this study, therefore, is treated both as a measure of "safety" as conceptualized by the dominant society, and as a marker of a dominant *habitus* endowed with social and cultural capital, i.e., "cultural practices, knowledge, and demeanors learned through exposure to role models in the family and other environments." [149] [150, p.5] This theoretical lens provides perspective for interpreting results that might come from the different concept mapping groups.

Turning now to the theories of Paulo Friere and Jürgen Habermas, it is interesting to examine how CBPR links with their broader theoretical lens. With increased research funding available for CBPR, many researchers claim to use CBPR, but there are a number of theoretical and practical differences in the way CBPR is done. Wallerstein and Duran have helped show how the various forms of CBPR have roots in one of two traditions, the Global Northern tradition or the Global Southern tradition. Broadly, the Northern tradition corresponds more with a problem-solving utilitarian approach used more by practitioners from the North, while the Southern tradition takes an emancipatory and critical consciousness approach, emanating from practitioners from the South.[151-154] The anthropological version of community development, focusing less on the process and more on the efficient achievement of economic development in native cultures, is an example of the Northern approach. [151] In contrast, the Southern tradition places more emphasis on process, engaging in reflexive dialogues in line with the work of Paulo Freire and Augusto Boal and the critical theory of Habermas.[151, 155, 156, 157] Wallerstein and Duran argue that the emancipatory, rather than the utilitarian, strain of CBPR holds greater promise for alleviating health disparities.[151] In the present study the use of CBPR and concept mapping is theoretically aligned with the empowerment education of Paulo Friere and also Habermas's communicative theories and the concept of the lifeworld, the "context-forming background of processes of reaching understanding."[157, p.204 158, p.444]

> To Habermas, capitalist societies have created two distinct worlds: the systems worlds of highly differentiated legal, economic and political systems and the life world, the resource in which individuals form their identity and reproduce their culture.' Increasingly people 'define themselves by their role within systems- they become objects- clients and consumers- rather than subjects or democratic members of civil society who reproduce themselves as social and cultural beings.' [159, p.32-33]

Habermas saw that the individual had agency and that the *lifeworld* could be shaped and changed through communicative discourse. In a sense, the process of engaging in CBPR bridges people that inhabit different *habitus*. This is certainly the case among the researchers and participants in the advisory group who begin to see issues from each other's viewpoints, reflecting on their own norms and values. This is a process that can lead to what Paulo Friere terms, conscientização, when people engage in "praxis" (a combination of reflection and action) to move from being objects to subjects.[160]

Concept mapping is a tool consistent with conscientização, allowing the community members complete control over the grouping and rating of ideas, a way of reflecting peoples' thinking processes back to them. This method satisfies the objectivity needed in studying a subjective matter, consistent with Habermas's grounding as a student of Husserl, the father of Phenomenology. As a philosophical movement, phenomenology's "primary objective is the direct investigation and description of phenomena as consciously experienced." [161] Through the lens of phenomenology we can make sense of how or why an environment full of objective hazards appears unsafe to one group and safe to another. Rather than investigate what different groups term or view as safe and unsafe, this study investigates how people who exist in different *habitus*, with different influences shaping their life-world, suggest and rate different solutions.

Overall, this study approaches the problem of physical inactivity by engaging community members to propose solutions for improving physical activity among children. By so doing, the researcher engages individuals from different communities from different *doxas* to provide contextually relevant solutions. This study moves

beyond a social-epidemiological approach and places residents and researchers on equal footing to say what interventions make sense to communities within distinct safety environments, which are also now understood to represent different *habitus*. As the community advisory council engages in the CBPR process, at a theoretical level, our dialogue allows for a degree of conscientização that results from reflecting on the different solutions emanating from different people.

Chapter Summary

In this study, physical activity is understood to be the product of multi-level influences described in the socio-ecological framework. From that framework an individual variable (race/ethnicity) and an environmental variable (safety) used in this dissertation study were explored in more depth, evidencing the complex phenomenon these variables represent. Next turning to the theory of Bourdieu, safety and race/ethnicity are seen as markers of locations on a social field, or different habitus with associated *doxas.* Therefore the differences in perceptions of needed interventions by safety context and race/ethnicity explored in this study are understood as perceptions and beliefs emanating from different *doxas*.

CBPR and concept mapping methods used for this study are used as a means of engaging people from different *habitus* and *doxa* in communicative discourse and praxis. This engagement is consistent with the Southern approach to CBPR and conscientização, that some authors claim holds promise as a method for alleviating health disparities.

CHAPTER III

METHODOLOGY

Research Design

This mixed methods study includes two phases. In the first phase, cluster analysis of secondary data from representative household surveys and block audits from the catchment area identified distinct safety contexts. The second phase involves engaging residents from the identified safety contexts in concept mapping efforts. The study protocol was approved by the Colorado Multiple Institutional Review Board.

Research Setting

This research builds from a community-based participatory research study initiated in 2006 to examine the impact of the built and social environment on health and health disparities.[99] The setting is unique because it includes Stapleton, one of the largest urban renewal projects in the United States, which was designed especially for active living, including green space, pocket parks, walking and bicycling trails, wide sidewalks and recreation amenities. Beginning in 2001, this redevelopment replaced the former Denver airport and its associated noise, traffic and air pollution which had impacted four adjacent neighborhoods: Northeast Park Hill, Greater Park Hill, East Montclair, and Original Aurora.[99]

Data describing the neighborhoods (Table III.1) demonstrate large variations within these contiguous neighborhoods. In line with the social ecological framework, these contextual differences and similarities are important in understanding how residents conceptualize solutions for increasing physical activity among neighborhood children.

Table III.1 Socio-Demographic Characteristics of Catchment Area.

Neighborhood	Population (#households, #households with 10-14 year-olds)	Ethnicity	% persons in Poverty**	At current address <1 yr**	Crime Rates Burglary and Violent Crime (per 1000 households†)
NE Park Hill **2000 Census ***2010 Census	8,729 (2744, 671) 7,821(2760, 518)	69% Afr.Am 24% Latino 5% White 51% Afr.Am 30% Latino 14% White	24%	22.9	41.3 9.8
Greater Park Hill **2000 Census ***2010 Census	19,118 (7522, 755) 17,972 (7308, 950)	36% Afr.Am 10% Latino N & S Park Hill* 28% and 75% White 24% Afr.Am 12% Latino N & S Park Hill* 44% and 77% White	9%	16.1 & 15.6 (N & S Park Hill)	23.5 & 17.2 3.2 & 4.6 (N & S Park Hill)
East Montclair **2000 Census ***2010 Census	7,506(4218, 671) 10,191(4276, 701)	32% Afr.Am 32% Latino 31% White 24% Afr.Am 28% Latino 32% White	22%	30.3	30.2 13.3
NW Aurora 2000 Census ****2009 ACS	24,400 (7773, 2763) 36,461 (NA, 3053	15% Afr.Am 58% Latino NA White 17% Afr.Am 58% Latino NA White	27%	N/A	N/A
Stapleton *Piton estimate ***2010 Census	5,296 (1871, NA) 13,948 (2543, 235)	NA 10% Afr. Am 13% Latino 67% White	0%	N/A	47.6 6.5

*Data provided by www.piton.org, ** US Census 2000, *** US Census 2010, ****2009 ACS, †2007 Piton Foundation

Participants from Taking Neighborhood Health to Heart were invited to join a community advisory council (CAC) to guide the research efforts, which ultimately included English, and Spanish-speaking adults and youth. Youth participants chose the

name “The Society of the Youth” and chose as the group’s vision: “The Society of the Youth’s dream is to have a safe and clean playground. A clean playground that has green grass, no graffiti, and where all kids come together to play.” In total 26 people (15 adults, 11 children) participated and there was consistent attendance by a dozen people (6 adults and 6 children), a size that encouraged participation, relatedness and ownership in the process.[162] Adults were given a $15 gift card and children a $7 gift card for their participation in monthly meetings, though the consistent participants continued to come after funding ran out and incentives were no longer offered. Participants were mainly responsible for guiding and refining research materials, facilitating concept mapping sessions and providing feedback regarding analyses. Youth also created a play to present the study results. In these ways, we tried to achieve the nine principles of CBPR described by Israel et al, principles that align with the Southern emancipatory approach of engaging community. These principles include: acknowledging the community as a unit of identify, building on community strengths, engaging community in each phase of the research, developing mutual co-learning, balancing research and action, and emphasizing local relevance and action. This co-learning process focused both on group process and research products.

The following two sections detail the methods used to address each of the two study aims.

Aim 1 Methods

Aim 1: Identify homogenous block group clusters by known physical and social correlates and measures of safety, including:

fear of crime, traffic safety, social cohesion, discrimination and incivilities.

Measures. Data from the original Taking Neighborhood Health to Heart study were collected using standard methods for achieving a representative sample.[163-166] A detailed description of the data measures and collection procedures are provided in the paper by Main et al., 2012.[99] The household survey included 950 randomly selected households representing the five neighborhoods and a neighborhood audit measure that was collected from randomly selected blocks in the catchment area. These instruments provided the data for the cluster analysis, i.e., social cohesion,[84] discrimination,[125] perceptions of safety,[167] and incivilities.[168, 169] Race, ethnicity, language and presence of youth in the home were also collected in the household survey, data that were later used for concept mapping sampling efforts.

I previously outlined the safety-related constructs in Figure II.1 and provide the details of their measurement below in Table III.2. These constructs include fear of crime and perceived traffic safety, both of which are related to parental concerns. Incivilities are also theorized to signal danger and create fear.[80] Social cohesion, a subscale of collective efficacy may have protective effects from violence. A measure of discrimination was also included as discrimination could influence a sense of safety as well as the interventions appropriate to improving safety.

Table III.2 Summary of Clustering Variables.

Construct (data source)	Questions	Scoring
Social Cohesion [84] (household survey)	1) this is a close-knit neighborhood, 2) people around here are willing to help their neighbors, 3) people in neighborhood generally don't get along with each other, 4) people in neighborhood don't share same values, 5) people in neighborhood can be trusted.	Scale ranges from 5-25, with 25 being most cohesive
Perception of crime subscale[167] (household survey)	1) there is high crime rate in my neighborhood 2) the crime rate in my neighborhood makes it unsafe to go on walks during the day 3) the crime rate in my neighborhood makes it unsafe to go on walks at night	Scale ranges from 1-4, with 4 being the least safe, the mean of three questions
Perception of traffic safety subscale[167] (household survey)	1) so much traffic along streets it makes it difficult or unpleasant to walk in neighborhood 2) the speed of traffic on most nearby streets is usually slow 3) most drivers exceed the posted limits while driving in my neighborhood	Scale ranges from 1-4, with 4 being most traffic, the mean of three questions
Experiences of Discrimination[125] (household survey)	1) school 2) getting hired 3) at work 4) getting housing 5) getting medical services 6) getting services in a store or restaurant 7) getting credit, bank loans or a mortgage 8) on the street or in a public setting 9) from the police or in the courts?	This scale totals the number of situations in which a person has experienced discrimination, from 1-9. I used the mean experiences of 8 and 9.
Incivilities [168, 169]	A walking block audit was conducted including observations for graffiti, litter, overall condition of grounds or landscaping, overall condition of buildings, condition of vacant lots, and broken windows or abandoned houses.[170]	

Cluster Analytic Methods Used to Identify Unique Safety Contexts. In order to identify distinct safety contexts from which concept mapping participants could be recruited and intervention needs compared, I combined the survey measures described in the previous section, into a cluster analysis. Initial analysis showed variability in the measures used among the five neighborhoods; then to allow for intra-neighborhood variability, household and audit data were aggregated to the block group level, totaling 57 block groups. After inspecting the frequencies, mean, median, range and variability of

each measure, I normalized the data to the range of 0 and 1. This was done by examining the range of values for each variable. The lowest value in the range was subtracted from each value and then each value was divided by the highest number in the revised range. Then, I entered these data into hierarchical agglomerative cluster analysis (average link with Euclidean distance) in SAS 9.1 to identify homogeneous subgroups. After inspecting the frequencies, means, and central tendencies of each cluster and reviewing correlations between the constructs, the best-fit cluster solution was selected, identified by the cubic clustering criterion, or CCC statistic. [171, 172] The face validity of the clusters was tested by mapping the clusters in GIS, showing the data correspond closely to distinct neighborhoods.

Aim 2 Methods

> *Aim 2:* Within a community-based participatory research context, use concept mapping methodologies to examine how *solutions* for increasing pediatric physical activity vary within and between different safety contexts.

Consistent with community-based participatory research, I worked with a community advisory council (CAC) originating from "Taking Neighborhood Health to Heart" to address this aim. We used concept mapping, "a method that can help communities develop locally relevant interventions… it obtains information regarding group level definitions and perceptions as opposed to individual conceptualizations and it obtains information on social and structural influences on outcomes."[11, p.284] Specifically, this method involves a number of structured steps: 1) preparing the focus prompt, 2) brainstorming solutions, 3) refining the solution set, 4) sorting the solutions, 5) rating the

solutions, and 6) interpreting the results and sharing the data.[98] The remainder of this section includes a description of the sampling frame used to draw concept mapping participants and details about the six steps outlined above, including related analytic methods.

Concept Mapping Sampling and Recruitment Methods. Participants from the original TNH2H adult study and from a subsequent "Kids Study"[173] used the same randomly selected blocks to recruit participants. Both studies asked permission to contact participants in the future. My sampling frame included participants who participated in either of these studies and agreed to future contact. Then I stratified the samples by safety context, race/ethnicity and language (English/Spanish), and randomly ordered these stratified samples for recruitment. Society of the Youth members participated in the sorting phase of the study and contributed some brainstormed ideas.

After recruiting for and conducting the idea generating and sorting sessions with in-person meetings, the Society of Youth CAC and I realized our participation rates were insufficient for the rating phase and agreed to conduct the rating phase of the study by phone. At that time, a third study, the "Apartment Survey" within the same footprint, was completed and we included a few of these participants so we would have equal numbers of people from each racial/ethnic group from each safety context. The origins of the sampling frame and correspondence to each concept mapping step is provided in Table III.3.

Table III.3 Sampling Frame for Concept Mapping Efforts.

	How Initial Sample Recruited	Sampling Frame	Steps of Concept Map where Participants were Included
TNH2H Adult Survey	Every fourth house on the randomly selected block was approached.	Data from 82% of 950 adults agreeing to contact after the TNH2H survey were reviewed. Those who reported children in the household were included in the sampling frame for the current study.	Brainstorming, Sorting, Rating
The Kids' Study	Every house on each of the randomly selected block was approached.	Households with 10-14 year-old youth were included.	Brainstorming, Rating, Sorting
The Apartment Survey	Inaccessible apartments for the initial adult survey were approached.	Six households from this study were included in the rating step of concept mapping.	Rating

Steps in Concept Mapping. Concept mapping methods follow prescribed steps, the overview of which, as well as the CAC involvement in each of these steps, are described below, while the more detailed data collection protocols are provided in Appendices 3-5.

1) Defining the focus prompt The original Taking Neighborhood Health to Heart council members were interested in focusing research on youth. Knowing this, I wrote a grant proposal, including the associated hypotheses and a letter of support from TNH2H members. The specific phrasing of the focus prompt emerged from interactions with The Society of the Youth community advisory council (CAC) and was piloted. After piloting and revising the statement, we chose the focus prompt, "What changes would increase physical activity among 10-14 year old children in your neighborhood?"

2) Idea generating phase. The sampling frame (combined participants of the household survey and kids' study who agreed to future contact) was stratified by race/ethnicity, context and language and put in random order. CAC members and I called

the randomly-ordered participant list and sent a flyer to invite their participation. The phone call provided an introduction and the flyer reinforced details such as time, location, $10 incentive, and date for the group-discussion formatted sessions. When people could not be located by phone, we mailed a flyer. The flyer included original art work designed by the youth to create a fun, inviting feel (Appendix 1). Participation rates were relatively low in this step, suggesting other methods would be needed for the rating phase of the study.

Besides helping to recruit, CAC members were also trained using materials adapted from other Taking Neighborhood Health to Heart efforts (Appendix 2). They were then hired as contractors to facilitate and take notes for brainstorming groups. Each group followed a common protocol (Appendix 3), and was audio recorded, with a note-taker documenting notes as a backup. In most circumstances youth and adults generated their ideas for solutions in separate groups that lasted two hours or less.

3) Refining the solution set. Two University researchers independently took notes from the available recordings (or session notes) of the idea generating sessions to capture specific participant suggestions. A CAC member subsequently reviewed the two resaerchers' notes; ideas listed on both note-takers' lists were included in the final list of community ideas. This final list was translated so each idea appeared in English and Spanish.

To condense the list of ideas to a manageable set, the advisory group reviewed each idea on individual cards, and attempted to identify duplicate ideas for the purpose of reducing our set of ideas. We attempted this task twice and were unsuccessful. Ultimately, I proposed that the least biased way to narrow the statements was to put the

ideas in random order and select the first 100 ideas; the committee and my dissertation chair agreed. Next, the advisory group members independently reviewed the first 100 ideas and identified duplicate or similar ideas. In the CAC, each member discussed the duplicates they identified and the group came to a consensus on which ideas were to be eliminated and whether and how statements needed to be edited. As duplicates were eliminated, we included lower ordered ideas and the list was checked to assure that evidence based ideas, e.g., reducing television time, making facilities accessible, were included. The final set of 100 ideas was translated and back-translated by different translators.

4) Sorting the solutions. The sorting phase also followed a standard protocol where, within a two hour session, individuals were given 100 cards with each of the randomly selected interventions and asked to sort the cards into piles that made sense to them and then to name the piles (Appendix 4). Despite low attendance in the brainstorming phase, we attempted to have sorting and rating efforts conducted in person with the same recruitment methods, with the exception that the incentive was doubled ($20). Even with the larger incentive, few people participated, so CAC members also participated in sorting the ideas. From these efforts, it became evident that some people could not understand the written materials in their native English or Spanish language. I had to discard data from two Spanish-speaking participants whose sorting efforts were incomplete and incoherent. This experience also reinforced the need to find alternate recruitment and administration methods for the rating phase.

5) Rating the solutions. Because there was relatively low attendance in the brainstorming and sorting study phases, the CAC and I redesigned the rating phase

materials to be administered by phone. The standard protocols for the rating phase were amended, a related COMIRB amendment was submitted and the final materials used are in Appendix 5. I hired individual contractors with survey administration experience (2 bilingual in Spanish and English; 1 English only) to collect the needed ratings by phone. Because we conducted individual interviews we didn't need the sample stratification to include language, so I restratified the sample by safety context and race/ethnicity alone and again randomly ordered the newly stratified samples. The recruiters sent formal letters describing the study and/or called participants, leaving a maximum of three messages. If phones were disconnected or the person was not contacted after three attempts by phone, recruiters made a home visit where they met the person, explained the study and provided a letter describing the study. If nobody was reached, recruiters left the study letter and wrote a note explaining that the phone number we had did not work. Up to two home visits were made for each participant. After all attempts to contact a participant were exhausted, we then attempted to reach the next person in the randomly ordered stratified sample. Adults were interviewed by phone first and then asked if they had a 10-14 year old youth in the house they would permit to complete the same survey. Thus adult and youth intervention ratings were collected independent of one another.

The CAC and I chose how to ask participants to rate the solutions. First we asked, "To increase physical activity among 10-14 year olds in your neighborhood, how needed would you say it is to (read statement); 1 is not at all needed, 5 is most needed:" We chose a second rating that read: "And how possible would that be? 1 is not at all possible and 5 is most possible." A CAC member was also employed to record these results in the concept mapping software.

6) Interpreting the results and sharing the data. I analyzed data to answer the study hypotheses and presented that to the CAC. The CAC reviewed the analyses and suggested other analyses to present. The CAC rejected the concept mapping format for sharing study results because it seemed relatively difficult to understand, and instead created a skit to represent the top results.

Concept Mapping Data Analysis. The Concept Systems Software (www.conceptsystems.com) and SAS 9.1 were used for concept mapping analyses. The Concept Systems Software allows users to enter sorting and rating responses, as well as a set of questions for each respondent, e.g., demographics, safety context. Kane and Trochim (2007)[174] describe the analytic methods utilized within the concept mapping software. Sorting information from participants is put into a "binary symmetric similarity matrix" which represents how many people put different ideas into the same pile. Then, this similarity matrix is used for nonmetric multidimensional scaling, which creates a two-dimensional point map where ideas that were more commonly put in the same pile are placed closer together than those not often in the same piles. According to Kane and Trochim[174], in multidimensional scaling the "stress" index is the key diagnostic test to determine if the point map is a good fit for the participant sorts. Stress measures the degree to which the distances on the map are discrepant from the values in the input similarity matrix." [174, pg.97] The smaller the stress test value, the better the map fits the data. A meta-analysis by Trochim (1993) showed that across a variety of concept mapping projects, the average stress test score was 0.285 with a standard deviation of 0.04. So 95% of concept mapping projects would have a stress test in the range of 0.205-0.365. [174]

Once the concept mapping software establishes x and y coordinates through multidimensional scaling analyses, these coordinates are used for hierarchical cluster analysis which creates the concept groupings seen in concept mapping. The more often participants sorted the ideas together the smaller area of the cluster, and larger area clusters represent broader groupings of ideas. Concept Systems uses agglomerative cluster methods, using the Ward algorithm that works well with distance-based data. [174] Authors note any number of clusters can be chosen and no specific number of clusters is better than another, and often this choice is made by the researcher rather than study participants

The hypotheses for this second study aim include:

H01: People in environments defined as being safe, having high levels of perceived safety and social cohesion and low measures of incivilities and discrimination will offer more solutions for increasing physical activity that are unrelated to the safety environment.

H02: Ratings of the solutions suggested by different demographic subgroups within safety environments will be more similar than the ratings of solutions offered between different safety environments.

To test these hypotheses I exported data from Concept Systems Software into SAS 9.1 and then used one-way ANOVA for bivariable analyses and Proc GLM for standard multivariable linear regression. I complemented these standard analytic techniques with concept mapping pattern matching in order to illustrate the ratings of intervention solutions within and between safety clusters. [175] Pattern mapping graphs

resulting from this method allow visual inspection of cluster agreement. For example, in this study, separate group ratings of intervention clusters are represented on separate vertical axes, with higher rated intervention clusters placed higher on the vertical axis and lower rated interventions placed lower on the vertical axis. To compare two different groups' cluster ratings, the vertical axis ratings of one group are shown next to a second group's ratings. For these comparisons, the concept mapping software produces a Pearson Product-Movement correlation coefficient (r), representing the "degree of statistical correspondence between the data from the two groups. The r coefficient can range in value from -1 to 1, with 1 representing a perfect correlation. This would be depicted by the clusters being listed in the same order on both axes with horizontal lines drawn from each cluster to its corresponding cluster on the opposite axis. An r of 0 represents a poor correlation, and an r of -1 represents a perfectly inversed relationship."[175, p.531] For example, if all safety clusters indicate that the same concepts are similarly important or actionable, then the Pearson product coefficient would measure 1. If the solutions proposed are rated in inverse order then the Pearson correlation coefficient would measure -1.

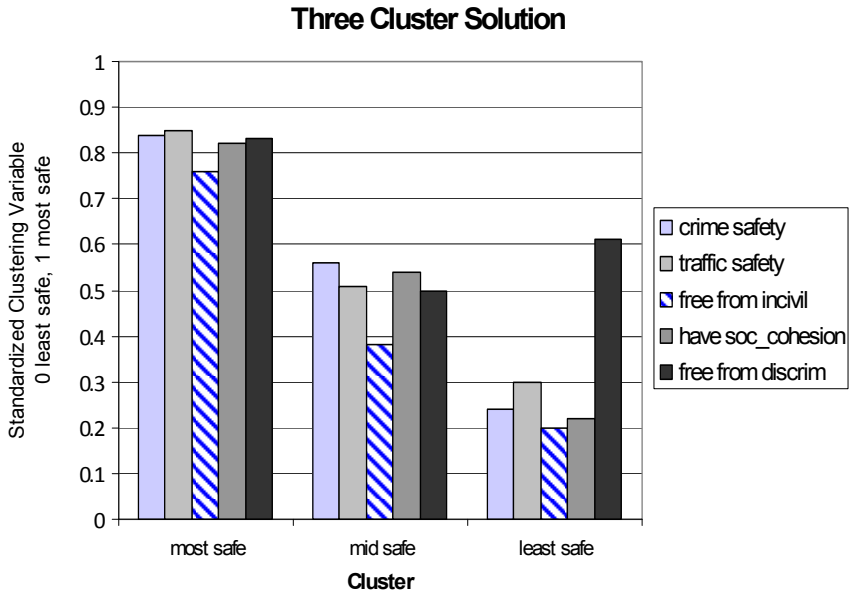
CHAPTER IV

RESULTS

Aim 1 Results

Aim 1: **Identify homogenous block group clusters by known physical and social correlates/measures of safety, including: fear of crime, traffic safety, social cohesion, discrimination and incivilities.**

The five variables included in the cluster analysis to model safety included: fear of crime, traffic safety, social cohesion and discrimination, as well as an objective measure of incivilities. This analysis resulted in a three cluster solution, depicted in Figure IV.1**,** revealing different neighborhood block groups having low, medium and high levels of safety. Because discrimination did not follow the pattern of the other four variables and has not traditionally been included as a measure of safety, the cluster analysis solution was tested to both include and exclude discrimination, but the original conceptualization, including discrimination, was selected as a better fit for the data. One-way ANOVA analysis comparing block groups in the 3 clusters rejected the null hypothesis of no difference between the clusters for each of the variables measured (Figure IV.1).



Cluster	crime safety	traffic safety	freedom from incivilities	have social cohesion	free from discrimination
Most safe	0.84	0.85	0.76	0.82	0.83
Mid safe	0.56	0.51	0.38	0.54	0.5
Least safe	0.24	0.3	0.2	0.22	0.61

Figure IV.1 Data from Three-Cluster Solution, with Data Normalized to 0-1 Scale.

A GIS student then mapped the block-group safety scores to allow visual review of the cluster solution, resulting in a map where red, yellow and green colors signified least, middle and most safe areas, respectively. Broadly, these maps provided face validity for the safety clusters for people who know the neighborhoods. The CAC requested this map of safety contexts not be distributed because it could stigmatize neighborhoods and I agreed, recognizing that this preliminary analysis is similar to conducting univariable distribution graphs to prove the appropriateness of different statistical techniques. That is, the map was simply used to confirm that the cluster analysis had face validity. This map can be requested for specific purposes by contacting

the author. With the safety contexts identified, I was able to stratify the sampling frame accordingly and begin recruiting residents from each of these contexts to participate in concept mapping.

Aim 2 Results

Aim 2: Within a community-based participatory research context, use concept mapping methodologies to examine how *solutions* for increasing pediatric physical activity vary within and between different safety contexts.

CBPR and the Community-Advisory Counsel. What distinguishes community based participatory research (CBPR) from other research has been articulated as nine principles of CBPR.[176] How this study intersected with each of these principles is described next. First, the community was the unit of identity, including residents of five geographic neighborhoods engaged in a parent research project, Taking Neighborhood Health to Heart (TNH2H). Second, the present study built on strengths of the community, including the TNH2H study where community members had participated in research, had built trust with one another and were vocal about their community needs. TNH2H included community members already recognized as community leaders in their neighborhoods. A third aspect of CBPR is facilitating collaborative, equitable partnership in all phases of the research. Researcher and residents contributed to the different phases of the research study as described below:

- Problem definition: The interest in working on youth-related issues was prompted by the original Taking Neighborhood Health to Heart Advisory Committee, while I offered the specific focus on youth physical activity and related hypotheses in response to an available funding mechanism.

- Data collection: I chose concept mapping methods because it necessitates community engagement; CAC members refined the focus prompt, collaboratively designed recruitment methods, chose rating scales and refined study materials; CAC members were trained and then contracted as facilitators and recorders for the brainstorming and sorting phases of the research. One community member was hired to record data collected from the rating phase of the study.
- Interpretation of results: I presented the study hypothesis results to CAC members for review and interpretation. They were also given the primary variables available for analysis, e.g., youth and adult need ratings; youth and adult feasibility ratings; neighborhood safety contexts. CAC members chose which way they wanted data to be analyzed for community presentations. These analyses are included as part of the results, complimenting the hypothesis testing initially proposed for the academic research aims.
- Application of the results to address community concerns: CAC members specifically chose not to show a map of the different neighborhood safety environments as that could stigmatize neighborhoods, focused on unifying themes of the results for presentations to policy makers and decided the results should be presented as a play or skit rather than an academic presentation alone. Members chose to focus on results that youth across communities supported, rather than looking at differences in solutions by safety context. The community group was able to use the study results to obtain a $500 grant that helped the group participate in one activity fair and build partnerships to

create a second activity fair attended by hundreds of community members in second part of the catchment area (Appendix 6).

Fourth, Israel et. al., have described CBPR as promoting co-learning and capacity building among all partners. As a researcher, I helped the community group gain research experience in group facilitation, recruitment, data entry, data analysis and introduced advocacy principles. Four people received recommendations for jobs or scholarships. Two youths wrote a grant that was not funded, and then adults worked together to write a second small grant that did receive funding. When we were offered the opportunity to present our study results as part of an annual meeting where the U.S. Surgeon General was scheduled to speak, the community group brought a new idea to me, suggesting we present the study results in the form of a play, rather than as an academic-oriented PowerPoint presentation. The older youth in the group took over writing and directing the play. In the end, an actor working with Kaiser Permanente's Educational Theatre Program taught the youth how to stage their skit and some basics of acting. I learned the importance of incorporating community engagement through each phase of the study, including study design and analysis: if left to myself, I could have unnecessarily stigmatized the included neighborhoods without necessarily adding value. While the group focused on the presentation, in retrospect, we didn't strategize sufficiently about how we would build on the presentation, where the audience included policy makers and linkages to funding opportunities.

All the CAC participants worked together to help address one another's hardships: money for food, lack of health insurance, disengaged parents, depression, issues related to trust. In one instance, a CAC member led the rest of the group in

praying for one of our members. I didn't have a lot of the knowledge and skills community members shared, and I also learned how little expertise I have in creating youth-led initiatives, despite previous community organizing and youth-led evaluation experience. I belatedly brought in help, which was rejected because the group had already formed an identity and was sensitive to outside input. All these experiences, from simple things like choosing what food to bring to meetings, to acceptance of professional "outside" help, was all part of the communicative discourse, the mixing of different *doxa* that challenged us as a community, but it may be these very challenges that gave us the gift of deep transformative community experience. Below are a few illustrative quotes to understand the nature of the group:

- "In the past when I did attend meetings it wasn't the community's word it was the city's word…but they don't live in this neighborhood so they don't know what the neighborhood needs."
- "I think the program is great because it allows community members, people who may never show up at other places or other meetings to voice their opinions about what they want for their kids or the youth in the community."
- "I'm very proud of what is going on."
- "..the whole purpose is to find something that they (youth) want so that they can become more physically active and if they put their ideals into it and they create it then they'll participate in it."

A fifth principle of CBPR is that it integrates and achieves a balance between research and action for the mutual benefit of all partners. As this research is completed so are actions in the community. For example, we decided to meet one of the expressed

needs, by offering activities in a local park once a month during the summer, including swimming pool entrance coupons for participants. Later, the group received a Denver Foundation Strengthening Communities grant that resulted in participation in two community fairs. Two hundred people visited our table at a Get Outdoors Colorado fair in City Park, and about 500 people attended a family activity fair we organized with partner organizations in Aurora. We anticipate this Aurora fair will be an annual event.

A sixth principle of CBPR is that it emphasizes local relevance of public health problems and attends to the multiple determinants of health and disease. By using concept mapping methods, community members contributed their ideas for improving their neighborhood outside any one framework, allowing them to group and conceptualize their solutions within a grounded framework. We did not address the seventh principle of CBPR, involving systems development through cyclical and iterative processes.

The eighth principle of CBPR is disseminating findings and knowledge gained to all partners, with all partners involved in the dissemination process. Results were interpreted and disseminated with the CAC members at a neighborhood health summit. Lastly, CBPR is described as involving a long-term process and commitment (even when funding is not available). This partnership has extended years beyond funding availability, with the group continuing to meet with plans to convene yearly to create a family activity fair in Aurora. As Randy Stoecker suggests, this was "a social change project, of which research is only one piece." [177, p. 102]

Concept Mapping Recruitment Efforts. People who participated in one of the three surveys described in the methods section were eligible to participate in the

brainstorming, sorting and/or rating phases of the concept mapping project. CAC members also contributed data to the brainstorming and sorting steps of this project. A description of the participants in these phases is provided in Tables IV.1 and IV.2 below.

To elicit community solutions for increasing physical activity among youth aged 10-14, we held idea generating sessions between 11/14/09 and 2/13/10. A total of eleven groups with 62 participants (Table IV.1) generated 318 ideas in these sessions. The advisory group added twelve ideas and then the list of 330 solutions (Appendix 7) were put in random order and the first 100 unduplicated ideas were chosen for the solution set.

The next step in concept mapping efforts was to engage the community to pile sort the ideas. Between 6/19/10 and 8/28/10, we held 5 groups with 17 people (See Table IV.1) contributing pile sorting data for the 100 solutions. Individual participant pile sorts were combined in the concept mapping software, producing data or concept clusters.

Table IV.1 Summary of Brainstorming and Sorting Phase Participants

Participants	Total	Black	Latino*	White	Adult	Child
Brainstorming	62	15	32	15	31	31
Sorting	17	4	5	8	12	5

*Nineteen of these participants did not complete the demographic survey, but participated in Spanish-speaking group or were child of parents in Spanish-speaking groups and therefore assigned to the Latino/Hispanic category or could have been designated unknown. In addition to the 62 participants, CAC members contributed 12 intervention ideas.

To assure better representation of the study population, between 8/8/10 and 12/20/10, the study team conducted the rating phase by phone or in-person. We asked participants to rate the solutions in terms of need and possibility (feasibility). The summary of rating phase recruitment efforts by context and ethnicity is shown in Tables IV.2 and IV.3.

Table IV.2 Rating Participant Recruitment Effort.

RATING PARTICIPANTS	# Homes Attempted	Declined	No response to multiple attempts	Moved	Adult Raters	Youth Raters
Context 1 black	15	6.3% (1)	6.3% (2)	12.5% (2)	10	4
Context 1 white	15	0	20.0% (3)	6.7% (1)	11	3
Context 1 Latino*	14	0	7.1% (1)	7.1% (1)	11	4
Context 2 black	19	0	10.5% (2)	36.8% (7)	10	3
Context 2 white	21	4.8% (1)	14.3% (3)	28.6% (8)	9	4
Context 2 Latino	22	4.5% (1)	9.1% (2)	40.9% (9)	10	3
Context 3 black	24	4.2% (1)	8.3% (2)	45.8% (11)	10	3
Context 3 white	16	0	18.8% (3)	18.8% (3)	10	4
Context 3 Latino	20	0	20.0% (4)	30.0% 6	10	4
Totals*	166	2.4% (4)	12.6%(22)	27.5% (48)	91	32

* The reason for one person's non-inclusion was not recorded

Table IV.3 Summary of Rating Phase Study Participants.

		Race/Ethnicity			**Context**		
Participants	Total	black	Latino	White	1	2	3
Adult	91	30	31	30	32	29	30
Youth	32	10	11	11	11	10	11
Total	123	40	42	41	43	39	41

Participant-Suggested Interventions. The first study hypothesis is: People in safer environments (having high levels of perceived safety and social cohesion and low measures of incivilities and discrimination) will offer more solutions for increasing physical activity that are unrelated to the safety environment.

To evaluate this hypothesis, solutions from each of the brainstorming groups were listed and categorized as related or unrelated to safety. Any idea related to traffic safety, police, gangs, need for youth supervision, or safety stated in some other explicit way was considered related to safety. The ideas were categorized twice, once in July 2011 and again in May 2012; only eight discrepancies in categorization occurred between the first and second categorizations of the 330 ideas. Those 8 ideas were reviewed and given a final categorization in May 2012.

Reviewing all brainstormed ideas, 23% (74/318) were related to safety. To be consistent with later analyses, interventions suggested by participants from the middle- and least- safe contexts were combined and compared to interventions suggested by participants in the safest context. Results show that 30% of the solutions suggested by participants in less safe contexts and 13% of solutions suggested by participants in the safest context were related to safety, rejecting the null hypothesis of no difference between the groups.

Interestingly, only 5% of solutions suggested in youth-only groups were related to safety, compared to 39% of solutions from the adult-only groups. Of the ideas added by the community advisory council, three or 25% of the ideas were safety-related.

Table IV.4 Summary of Safety-Related Interventions by Context.

Context	**Participants**	**Language**	**Date**	**Total Ideas**	**Safety Ideas**	**% of Ideas = Safety**
2&3	Adults	Spanish	11/14/09	15	7	47%
2&3	Adults	Spanish	2/6/10	13	9	69%
2&3	Youth and Adults	English	2/6/10	44	5	11%
2&3	Youth	English	11/14/09	12	2	17%
2&3	Adults	English	11/14/09	13	5	38%
2&3	Adults	English	12/5/09	16	1	6%
2&3	Youth and Adults	English	2/13/10	26	11	42%
2&3	Youth	English	12/5/09	22	0	0%
2&3	Adults	English	12/5/09	32	18	56%
Subtotal 2&3				193	58	30%
1	Youth	English	12/12/09	82	4	5%
1	Adults	English	12/12/10	43	12	28%
Subtotal 1				125	16	13%
Youth total				**126**	**6**	**5%**
Adult total				**132**	**52**	**39%**
Grand Total				**318**	**74**	**23%**
CAC	Youth and Adults	Bilingual		12	3	25%

Concept Map of Suggested Interventions. After the brainstormed solutions were reduced to 100 ideas and community members sorted the solutions, these data could be represented as a point map (Figure IV.2). The map had a stress test value of 0.314, which is within the average range for concept mapping projects.[174] Each point on the map represents a different idea. The closer any two points are together, the more frequently the two ideas were sorted in the same pile. For instance, ideas 39 and 98 were sorted in the same pile by nearly all the sorting participants, whereas idea 98 was hardly ever (if ever) put in the same pile with idea 13.

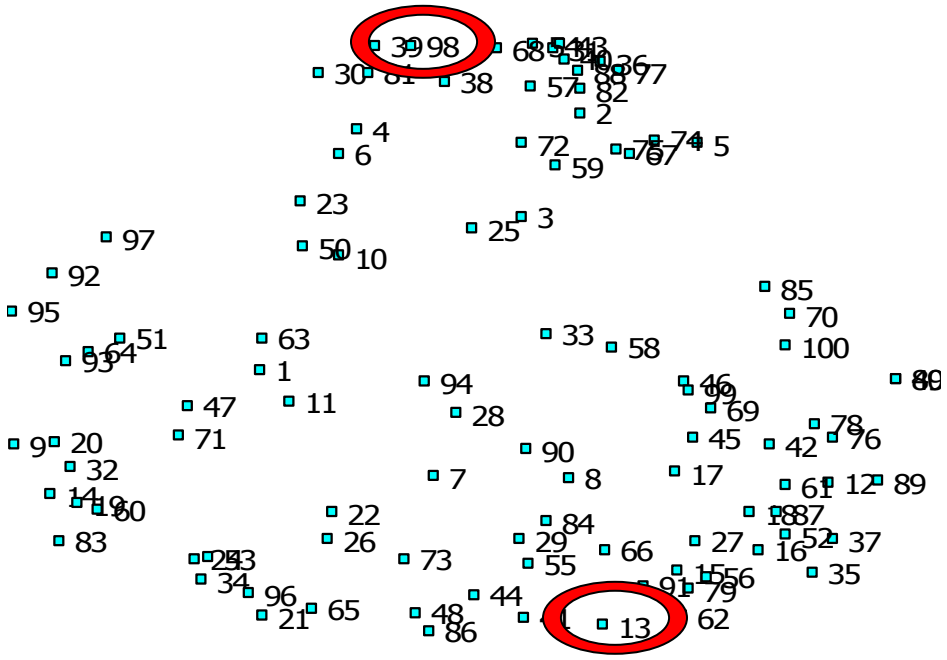


Figure IV.2 Point Map Resultant from Sorting Activity.

Like cluster analysis, any number of concept clusters could be generated from these data. But on inspection, the 3 cluster solution was chosen to best fit the data and address the research question. The three cluster solution included the following concepts: safety interventions, infrastructure/access improvements, and activity interventions (Figure IV.3). Using these three clusters, including a distinct safety cluster, I examined

the main research question of whether the relative perceived need for safety interventions differed between safety contexts and demographic groups. The points on the map correspond to the statements shown in Table IV.5.

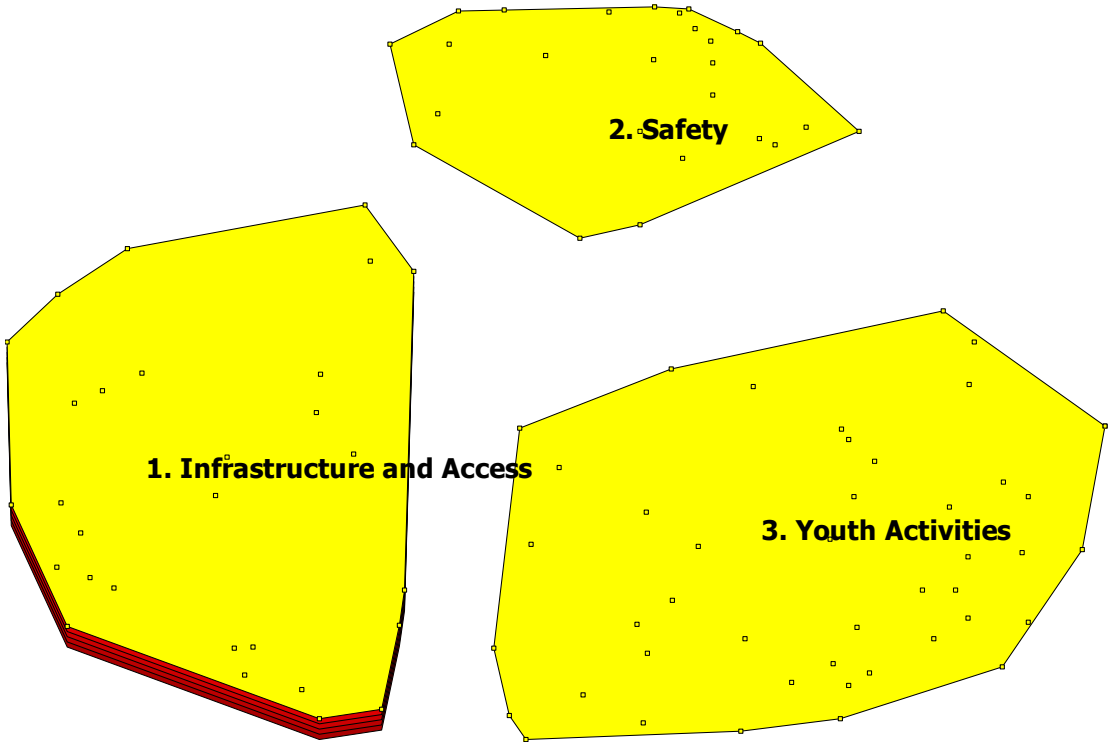


Figure IV.3 Three Cluster Solution.

Table IV.5 Statements Sorted into Three Intervention Clusters.

INFRASTRUCTURE/ACCESS

1. Have more mentors to encourage physical activity
9. Make more places to lift weights, do aerobics, and play sports
10. Have parents get their children involved
11. Use the park at Fitzsimmons
14. Provide a multi-sport facility where children can participate in tournaments, sports camps
19. Make playgrounds better with different equipment, like zip lines and more creative staff
20. Make the parks prettier with flowers and trees
21. Set up more biking paths to places you want to go, like school and the mall
22. Make a closer skating rink
23. Have chaperones (adult volunteers) take kids out of the city for fieldtrips
24. Have more stretching and warm up for sports
26. Have a football field close to home
32. Have more recreation centers around the neighborhood
34. Have more organized sports in elementary schools
47. Have less expensive instruments, uniforms, equipment
50. Have parents take children to the park
51. Reduce costs of recreation centers
53. Provide more physical activities in schools
60. Create more parks, playgrounds, and open places to play
63. Vote to be sure programs, like PE classes, are not cut from schools
64. Have a recreation center with free activities
65. Have students get up and walk or do some activity every 20 minutes at school
71. Have people talk at back-to-school night to tell others about opportunities to be active
83. Build more walking paths and trails nearby
92. Give money to schools to supervise kids after school - enrichment activities and physical activity, especially for girls
93. Reduce sport fees, especially for families with multiple kids
95. Build more businesses, restaurants and other places in the neighborhood that people can walk to
96. Unlock school playgrounds so they can be used after school hours and during breaks
97. Have more public restrooms and drinking fountains in parks

SAFETY

2. Improve safety in recreation centers
3. Have older youth watch younger kids outside to create safety
4. Have “responsible” parents and adults in the park and neighborhoods to watch over kids
5. Get a group of people to commit to report bad activities to the police
6. Have adults pay more attention to their children and check on them
25. Have parents volunteer to staff the school playgrounds after school
30. Put in traffic bumps to slow traffic
31. Give people a way to report crime anonymously
36. Educate people on how to report crime and what to look for
38. Add security cameras around the recreation center to keep it safe
39. Have fences to keep kids from running in streets
40. Have community members report license plates of people doing bad things- so reports are anonymous
43. Make police more visible

Table IV.5 cont'd Statements Sorted into Three Intervention Clusters.

54. Provide more security and protection for the kids and youth
57. Get rid of unproductive businesses, because they are crime magnets
59. Make a safe place for kids to go during summer or spring breaks
67. Put a fence around the playground area so kids feel safer
68. Protect children from traffic
72. Clean up the litter and graffiti in your neighborhood and neighborhood parks
74. Give kids freedom to be outside and let them know not to talk to strangers
75. Make travel safer to parks, recreation centers, and schools
77. Protect kids from gang members and bullies
81. Put in new street lights
82. Organize everyone to turn on porch lights to make the neighborhood safer
88. Enforce curfew laws
98. Have emergency telephones in the parks and in the neighborhood

YOUTH ACTIVITIES

7. Have a volleyball court close to home
8. Open/unlock tennis courts for things like roller-skating
12. Have snowman building competitions
13. Take and teach children to ski or snowboard
15. Go to the pool
16. Have a scavenger hunt where you go to look for different things like pine cones and birds with your family
17. Have kids do activities like sports
18. Youth having season passes to amusement parks, like Elitches or Water World, where they can be active

27 Make basketball tournaments

28. Teach kids about everyday fitness (like walking to school, the grocery store, walking the dog)
29. Have a dog to walk or other animals to interact with
33. Train or educate adults to facilitate youth physical activities
35. Have snowball fights
37. Have geogames (where people use a map and compass to find different "treasures")
41. Take students on a free snowboarding trip with school
42. Open the paddle boats in the parks more often
44. Have more skate parks for kids on wheels, like skateboards, rollerblades, etc
45. Take kids out walking with lunches and hygiene kits to give to the homeless- kids contributing to the community
46. Parents ride bikes with kids, have a family ride
48. Have music and more affordable after-school activities
49. Make available free or reduced price rentable sports or activity equipment
52. Have a walk-a-thon
55. Have a gym for dance competitions
56. Go for a field trip snow shoeing or ice skating
58. Have more kids walk or bike to school
61. Create a game of urban survivor
62. Take students on backpacking, hiking or camping trips
66. Create more sports and activities for kids
69. Set up different activities and stations in the park for the whole family

Table IV.5 cont'd Statements Sorted into Three Intervention Clusters.

70. Give youth something positive to do, a program to clean up neighborhood, help the elderly, make them feel worthwhile, like they have a purpose, like they count
73. Have hopscotch, hula hoops, jump ropes, "four square" tournaments after school
76. Provide more interesting activities to involve the whole community
78. Have a community history trivia contest
79. Have bungee jumping
80. Have free youth activity time at the rec centers for swimming, basketball and other activities
84. Jump rope at home
85. Have kids involved with after-school activities because they are safe
86. Dance in class or at school
87. Give prizes to encourage physical activity
89. Have music, block parties to draw people out
90. Have teachers give less work over the weekends so students have more time to play and do activities
91. Go to summer camp
94. Encourage kids to spend less time watching TV and using computers
99. Support having 'mobile playgrounds,' a semi-truck of toys that can be taken to different places
100. Get a group of kids together to organize and advertise youth events (with flyers or word-of-mouth)

Multivariable Analyses to Evaluate How Ratings by Different Demographic Subgroups Vary within and between Safety Contexts. The second study hypothesis is: Ratings of solutions suggested by different demographic subgroups within safety environments will be more similar than the ratings of solutions offered between different safety environments.

To address the first study hypothesis, I first used ANOVA analyses to compare the average ratings of need for safety intervention combining youth and adult participants living in the three geographic safety contexts. This analysis (Table IV.6) shows for all participants in the rating phase of the study, participants living in the safest geographic context rated the need for safety interventions lower than participants from the other two contexts, supporting the study hypothesis, $F=17.5$, $p<0.001$.

Table IV.6 Average Need for Safety Interventions by Safety Context.

Geographic Context	Participants (N)	Mean	Std Dev	Min	Max
Safest	43	3.23	0.60	1.46	4.50
Medium Safe	39	3.93	0.66	2.19	4.96
Least Safe	41	3.94	0.63	2.19	4.96

Comparisons of Safety Intervention Needs. The previous ANOVA results showed the rated need for safety interventions was higher in the two least safe contexts compared to the safest context. To examine the relative influence of environmental context and individual characteristics on need for safety interventions, I expanded the ANOVA analysis to a multivariable regression analysis including ethnic/racial groups and adult or youth age group as covariates. In the adjusted analysis, the R-square value was 0.38. Adults were more likely than youth to see a need for safety interventions; and black and Latino participants (who were in equal numbers in all safety contexts) were more likely to see a need for safety interventions compared to white participants (Table IV.7). There were differences in the rating of safety intervention needs by geographic safety context, but also by ethnic group, and age group (youth v. adult). These results show the geographic context was the strongest correlate of perceived need for safety interventions, but there were also significant differences by ethnic and age group. This finding supports the hypothesis that safety context, more than individual characteristics, is related to participant perception of what interventions are needed to increase youth physical activity. Because this higher relative need for safety interventions could be indicative of a higher need for all interventions generally, the perceived needs for the other intervention clusters are examined in the next sections.

Table IV.7 Mean Need for Safety Interventions.

Parameter	Estimate	Standard Error	t Value	p Value	F value
Intercept	3.37	0.15	23.08	<0.01	
Black Latino White	0.59 0.48 0.0	0.13 0.13 -	4.68 3.70	<0.01 <0.01	12.07
Safest Medium Safe Least Safe	-0.73 -0.05 0.00	0.13 0.13	-5.85 -0.39	<0.01 0.69	21.33
Adult Child	0.30 0.00	0.12 -	2.50	0.01	6.25

Comparisons of Infrastructure/Access Intervention Needs. Similar analyses were conducted to see how different demographic groups rated infrastructure/access improvement needs, with similar findings (Table IV.8). In this model the R-square value was 0.20. Adults in the two least safe contexts thought infrastructure/access improvements were more needed than adults in the most-safe context. Black and Latino participants thought infrastructure/access improvements were more needed than white participants. Children and adults rated the need for infrastructure/access improvements similarly. Again, the absolute value for the safety context estimate was larger than any other estimate, showing context, more than individual characteristics, shape the perceived need for infrastructure/access improvement interventions to increase physical activity among youth.

Table IV.8 Mean Need for Infrastructure/Access Interventions.

Parameter	Estimate	Standard Error	t Value	p Value	F value
Intercept	3.86	0.11	35.67	<0.01	
Black Latino White	0.23 0.22 0.0	0.09 0.10 -	2.51 2.33	<0.01 0.02	3.88
Safest Medium Safe Least Safe	-0.40 -0.06 0.00	0.09 0.09	-4.33 -0.64 -	<0.01 0.52	10.89
Adult Child	-0.03 0.00	0.09 -	-0.40 -	0.69	0.16

Comparison of Activity Intervention Needs. Finally, I analyzed the data to determine whether different groups rated activity intervention needs similarly, with results indicating some consistent and other unique findings (Table IV.9). In the adjusted analysis, the R-square value was 0.18. Again, people in the two least safe contexts thought activity interventions were more needed than the participants in the safest context. Black and Latino participants thought activities were more needed than white participants. Youth thought activities were more needed than adults. The estimate for ethnic group was larger than that for context, suggesting that ethnic group had a stronger influence than context on the perceived need for activity interventions.

Table IV.9 Mean Need for Activity Interventions.

Parameter	Estimate	Standard Error	t Value	p Value	F value
Intercept	3.73	0.11			
Black Latino White	0.29 0.29 0.0	0.10 0.10 -	3.01 2.94 -	<0.01 <0.01	5.85
Safest Medium Safe Least Safe	-0.24 -0.03 0.00	0.10 0.10 -	-2.54 -0.26 -	0.01 0.80	3.83
Adult Child	-0.19 0.00	0.09 -	-2.10 -	0.04	4.41

Summary of Multivariable Analyses. Together, the three multivariable analyses suggest that context and individual characteristics all influence individuals' perceived needs for interventions. Participants in less safe contexts thought all interventions were needed more than those living in safer neighborhood contexts. Yet the multivariable analysis showed there were no differences between the ratings of participants in the two least safe contexts. Context (most safe v. two less safe contexts) had a larger independent association with safety and infrastructure/access needs than individual factors, e.g., race/ethnicity or age group. In activity intervention analyses, race/ethnicity had a larger relative influence on perceived needs than context.

Concept Mapping Analyses.

Concept Maps by Context and Demographic Groups. Above, the multivariable analyses examined how independent variables influenced the perceived need for each intervention cluster separately, e.g., safety, infrastructure/access and activity interventions. By comparison, concept mapping analyses provide a pictorial comparison of the relative importance of different intervention clusters within specific groups. Though these analyses could be accomplished with multiple ANOVA analyses, the graphic concept mapping representation was chosen instead.

In the maps provided in this section, the intervention clusters are shown. Each cluster has a specific number of "layers," which represent the rating, where a greater number of layers correspond to a higher relative need. For example, the title of the first map (Figure IV.4) indicates this is a cluster rating map for adults overall. There are four layers associated with the infrastructure/access intervention grouping, showing adults

thought this intervention cluster was the most needed, followed by safety interventions (2 layers) and youth activities were least needed (1 layer).

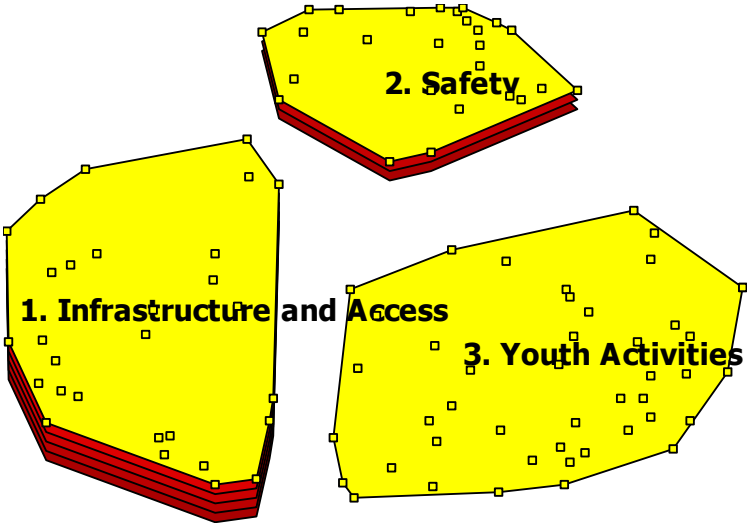


Figure IV.4 Adult Rating of Relative Need for Different Intervention Clusters.

Figure IV.4 (Adults) contrasts considerably with the cluster rating map of youth (Figure IV.5). Youth thought infrastructure/access and activity interventions were most and equally needed (4 layers per group), while safety interventions were least needed (1 layer).

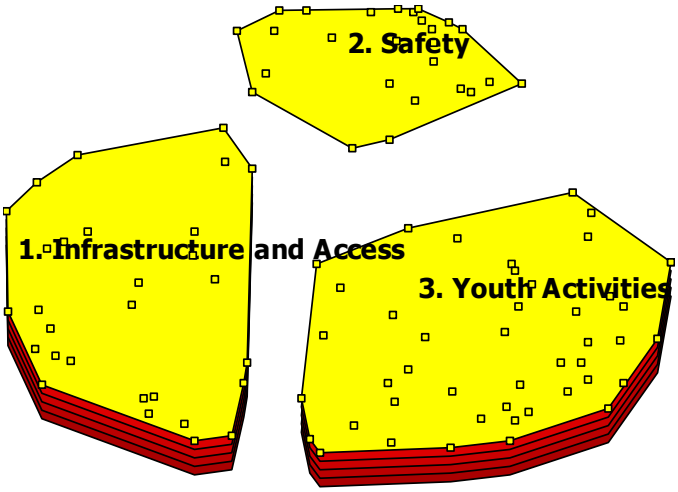


Figure IV.5 Youth Rating of Relative Need for Different Intervention Clusters.

Thus, while the multivariable analyses showed how the need for each intervention cluster was influenced by individual and contextual variables, these concept mapping analyses show the relative need for the different interventions by selected characteristics. Among the overall adult and youth populations, safety interventions are perceived as less needed than other interventions.

Comparing Intervention Needs among Adults within and between Safety Contexts. This and the next section breaks down the adult map above to show how adult ratings of intervention needs differ by safety context. Analyses separated youth from adults because results in the previous section showed youth and adults had clear differences in their perceived intervention needs. Also, because earlier multivariable analyses showed nearly identical ratings among the two least safe clusters, and concept mapping pattern matching analyses confirmed these results (Appendix 8), these populations are combined in these concept mapping analyses.

Among the adults in the safest context (Context 1), infrastructure/access improvements were most needed, followed by youth activity interventions; safety interventions were perceived as least needed (Figure IV.6).

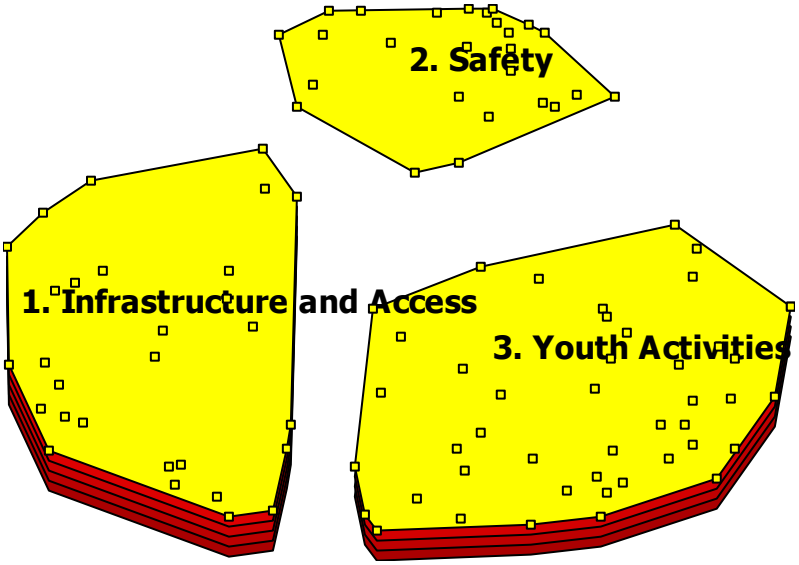


Figure IV.6 Relative Need for Interventions by Adults in Context 1.

In contrast to the relatively low need for safety interventions in Context 1, among adults in the two least safe contexts, safety interventions are among the most needed interventions (Figure IV.7).

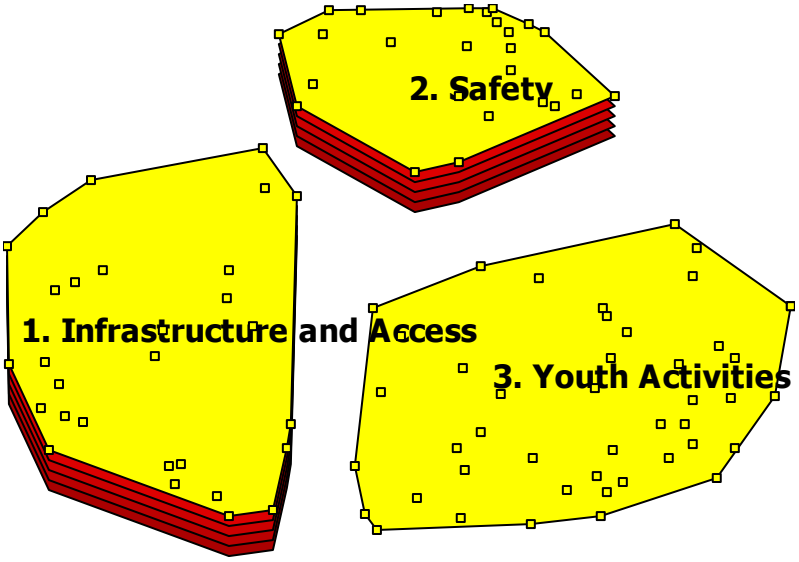


Figure IV.7 Relative Need for Interventions by Adults in Contexts 2 and 3.

We can more formally compare the cluster rating maps for the adults in these different contexts with pattern matching. As described in the methods section, with

pattern matching each group's intervention cluster ratings are shown on a separate vertical axis. A vertical axis representing the first group's responses is positioned next to a second vertical axis representing the second group's responses. The concept mapping software calculates a Pearson correlation coefficient to compare the ratings, where an r value of 1 corresponds to perfect agreement in the ratings among the two groups and an r value of -1 represents a complete disagreement.

In the pattern match shown below (Figure IV.8), the cluster rating map of participants from the safest context is represented on the left vertical axis. The cluster rating map from adults in the two less safe contexts is represented on the right vertical axis. In cluster rating maps, higher ratings are represented with layers and in pattern matching the higher rated interventions are shown higher on the vertical axis. The labels on the axis show the relative rating of the interventions. For context 1 participants, infrastructure/access interventions are rated as most needed, whereas safety interventions are rated as most needed for context 2 and 3 adults. The lines between the left and right axis show the difference between the group ratings of the same intervention cluster. In the pattern match below, the average ratings ranged from 3.28 to 4.04. Participants in the two least safe contexts rated every intervention cluster as more needed than even the highest needed intervention in context 1. The Pearson Correlation coefficient for the pattern match -.47 indicates disagreement between the groups on the need for different interventions.

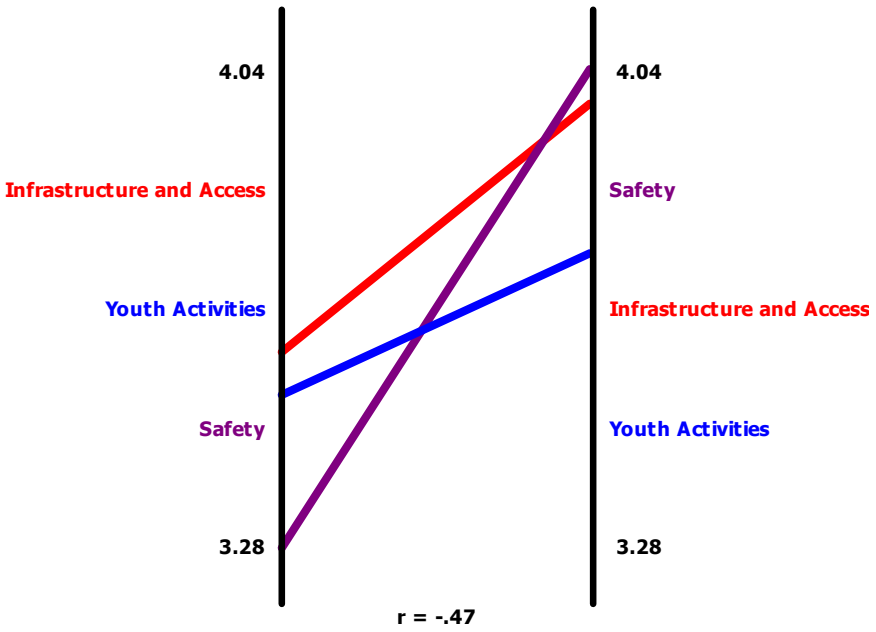


Figure IV.8 Pattern Match of Adult Intervention Needs Context 1 v. Contexts 2 & 3.

Comparing Intervention Needs among Youths within and between Safety Contexts. Similar to the analyses just shown for adults, cluster maps were also created to compare the relative ratings among youth between safety contexts. These analyses show youth in the safest context rated safety interventions as least needed and infrastructure/access and activity interventions as equally and most needed (Figure IV.9).

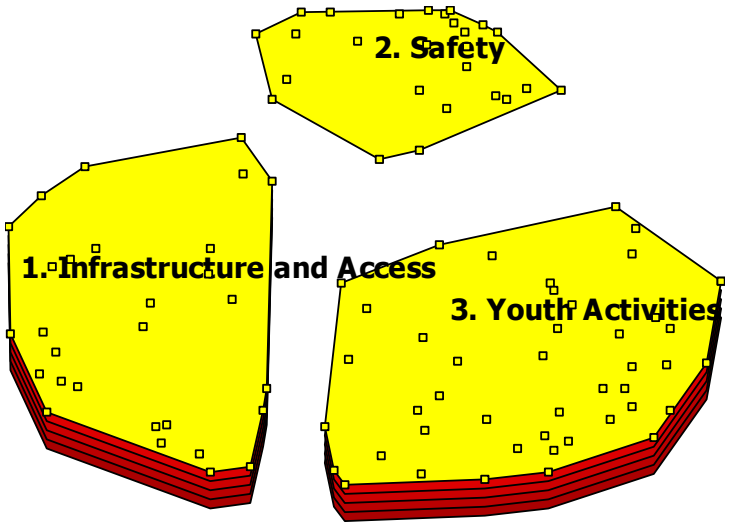


Figure IV.9 Relative Need for Interventions by Youth in Safest Context.

Youth in contexts 2 and 3 showed nearly identical patterns in their cluster rating map as youth in context 1, i.e., safety interventions were rated as least needed and infrastructure/access and activity interventions were most needed (Figures IV.10 and IV.11).

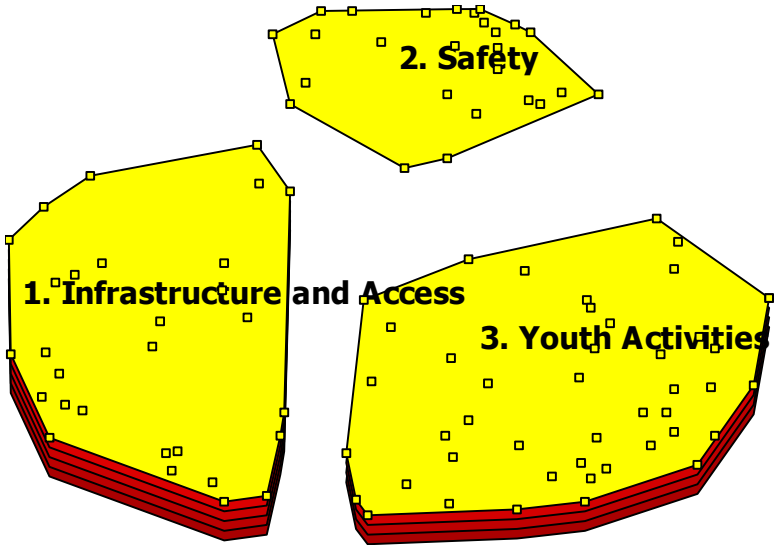


Figure IV.10 Relative Need for Interventions by Youth in Second-Safest Context (Context 2).

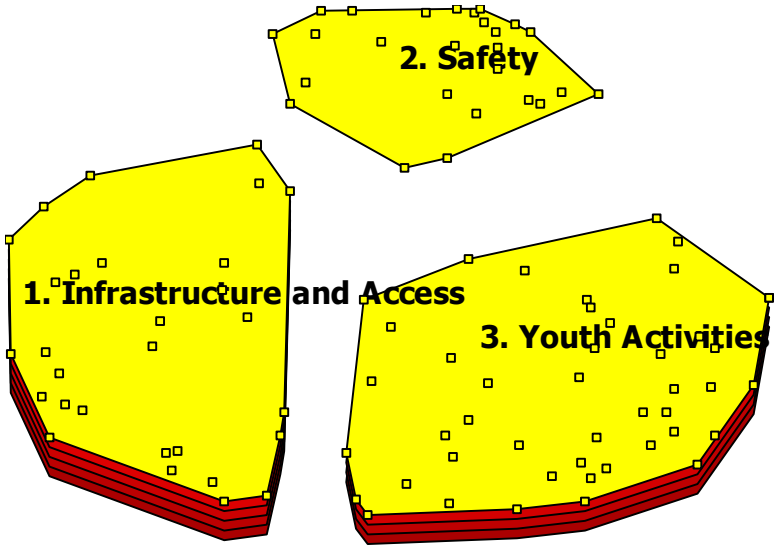


Figure IV.11 Relative Need for Interventions by Youth in Least Safe Context (Context 3)

The similarly perceived intervention needs among youth across safety contexts contrasts with the different needs perceived by adults across these same contexts. The more formal comparison of youth ratings between clusters is again achieved with the pattern match. In the pattern match shown below (Figure IV.12), the cluster rating map of youth from the safest context is represented on the left vertical axis. The cluster rating map from youth in the two less safe contexts is represented on the right vertical axis. For all youth, activity and infrastructure/access interventions were rated as the highest needs, while safety interventions were considered least needed. Similar to their adult counterparts, youth in the two least safe contexts rated every intervention cluster as more needed than even the highest needed intervention in context 1. The Pearson Correlation coefficient for the pattern match 0.98 indicates nearly complete agreement between the two groups of youth.

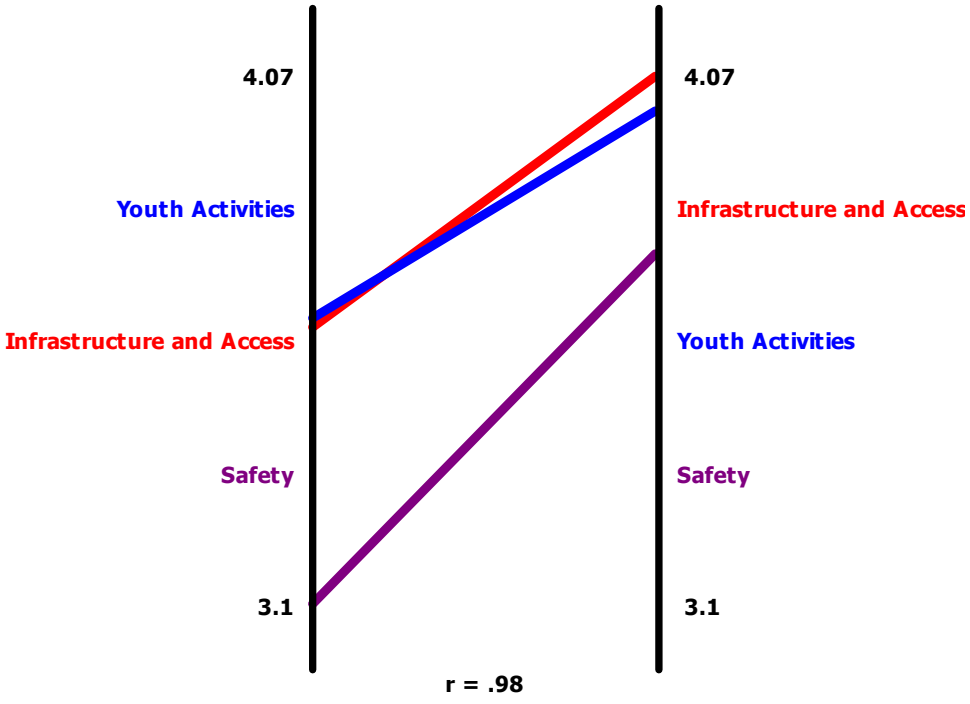


Figure IV.12 Pattern Match of Youth Intervention Needs Context 1 v. Contexts 2 & 3.

Comparing Intervention Needs among Ethnic Groups within and between Safety Contexts. As the relative rating of intervention needs were shown for adults and youth in different safety contexts, the relative need for interventions by racial/ethnic group were also of interest. Below, the first three cluster rating maps (IV.12-IV.14) show that within the safest cluster, white, black and Latino participants have similar relative ratings of what interventions are needed, with safety interventions ranked lowest.

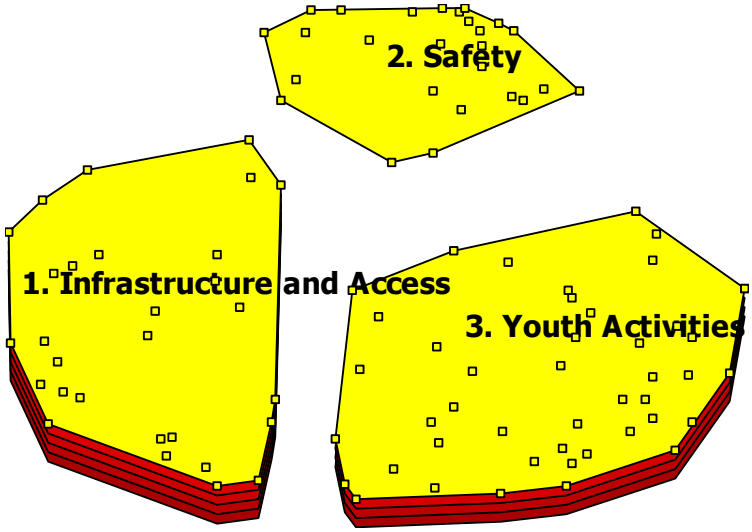


Figure IV.13 Relative Intervention Needs for White Adults in Safest Context.

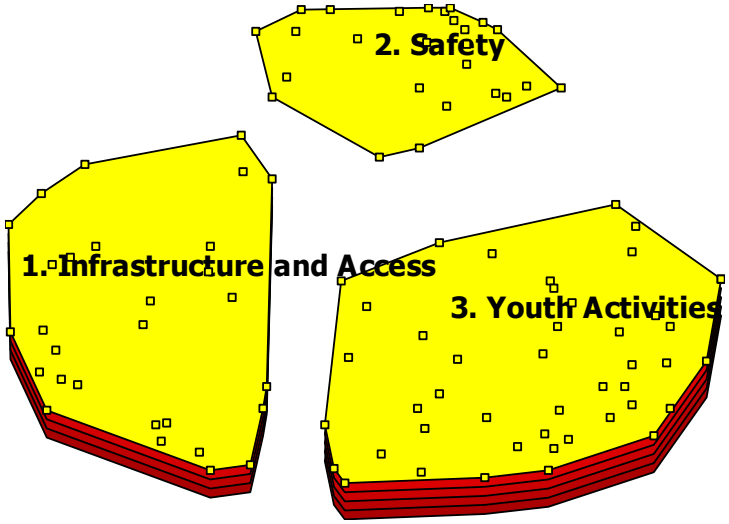


Figure IV.14 Relative Intervention Needs for Latino Adults in Safest Context

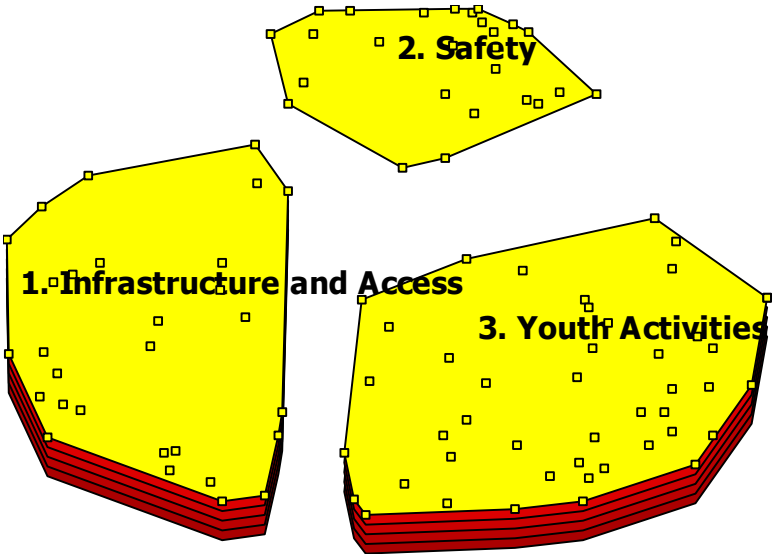


Figure IV.15 Relative Intervention Needs for Black Adults in Safest Context.

In contrast to the similar ratings of safety intervention needs in the safest context shown in the previous 3 figures, there is a difference in need for safety interventions between white, black and Latino participants in contexts 2 and 3 (Figures IV.16-IV.18).

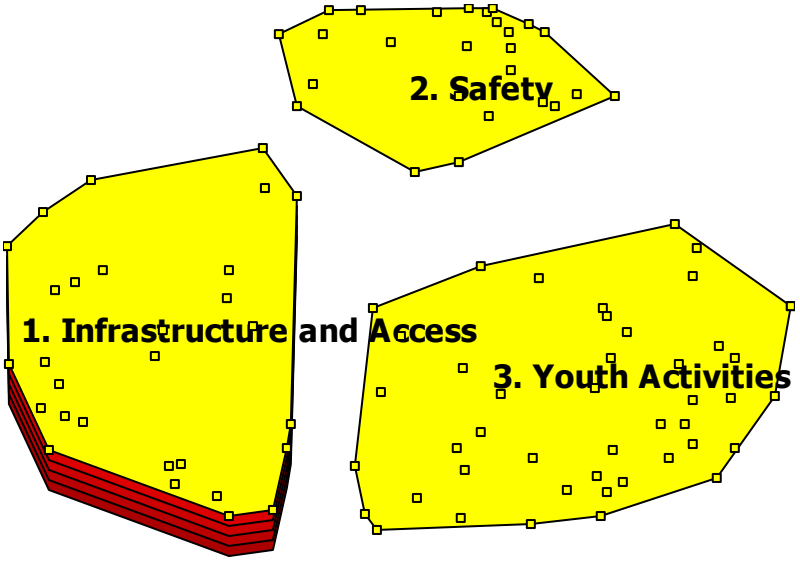


Figure IV.16 Relative Intervention Needs for White Adults in Two Least Safe Contexts.

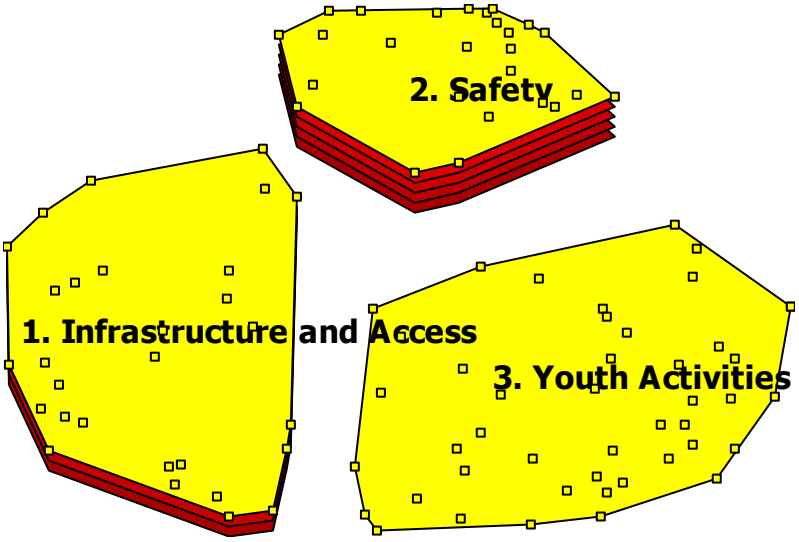


Figure IV.17 Relative Intervention Needs for Black Adults in Two Least Safe Contexts.

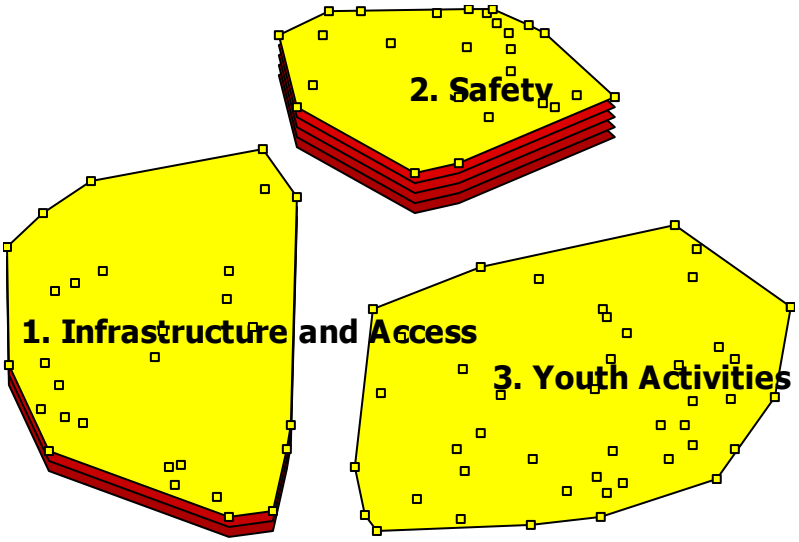


Figure IV.18 Relative Intervention Needs for Latino Adults in Two Least Safe Contexts.

Because equal numbers of black, white and Latino participants were sampled from each cluster, it is possible to combine the ratings of ethnic groups between contexts and examine whether there are differences by ethnic group. Three pattern matches are

shown below comparing all Latino and black adult ratings (Figure IV.19), then all Latino and white adults (Figure IV.20) and then all black and white adults (Figure IV.21).

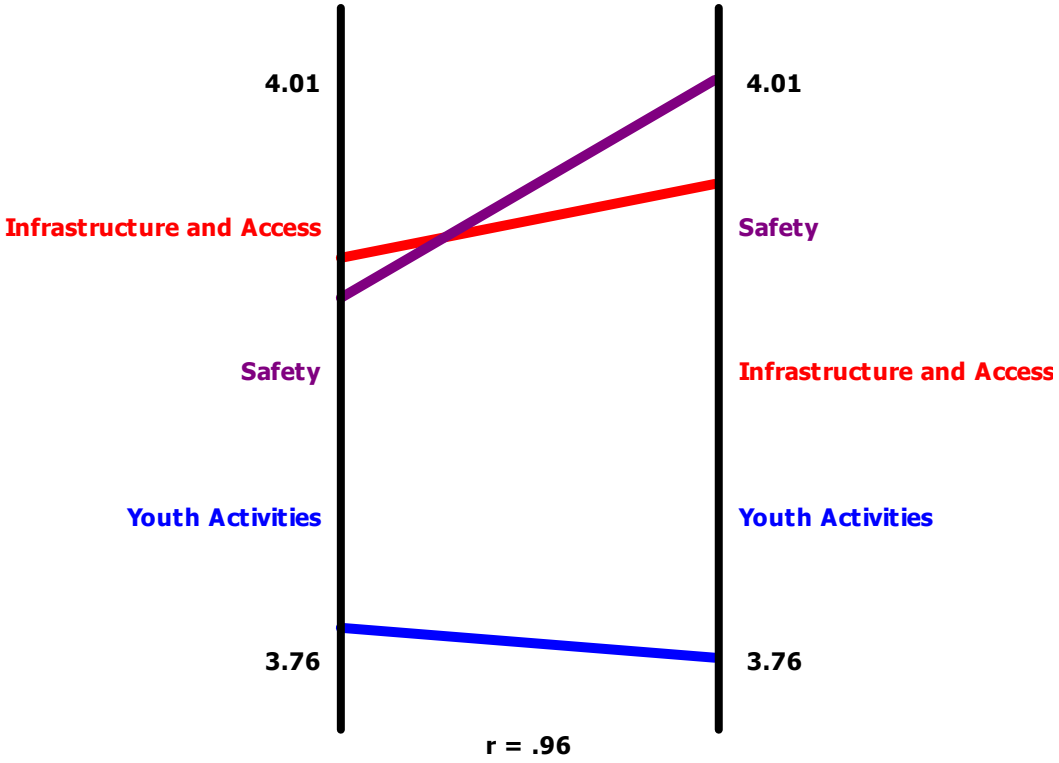


Figure IV.19 Pattern Match Comparing Latino (left) and Black (right) Adult Ranking of Intervention Needs.

In this pattern match, the Pearson correlation coefficient is 0.96, representing near complete agreement between Latino adult and black adult intervention ratings. Both groups rated youth activities as least needed, and safety and infrastructure/access interventions as highly needed. The black adult participants expressed a slightly higher need for safety and infrastructure/access interventions compared to their Latino counterparts.

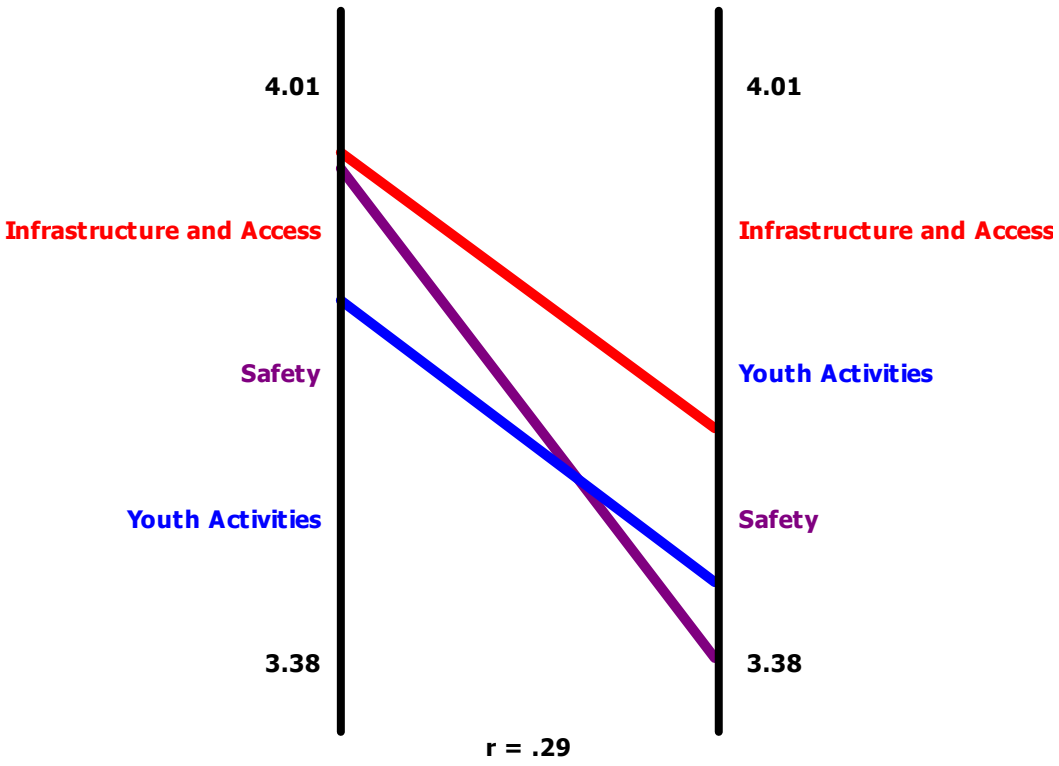


Figure IV.20 Pattern Match Comparing Latino (left) and White (right) Adult Ranking of Intervention Needs.

In the pattern match shown in Figure IV.20, the Pearson correlation coefficient is 0.29, suggesting a low level of agreement in the intervention ratings between Latino and white adults. Latino adults expressed a greater need for every cluster of interventions compared to white adults. Both Latino and white adults thought Infrastructure/access were most needed interventions, but among Latino adults, safety and infrastructure/access interventions were rated similarly high. Among white adults safety interventions were rated least needed of all the interventions.

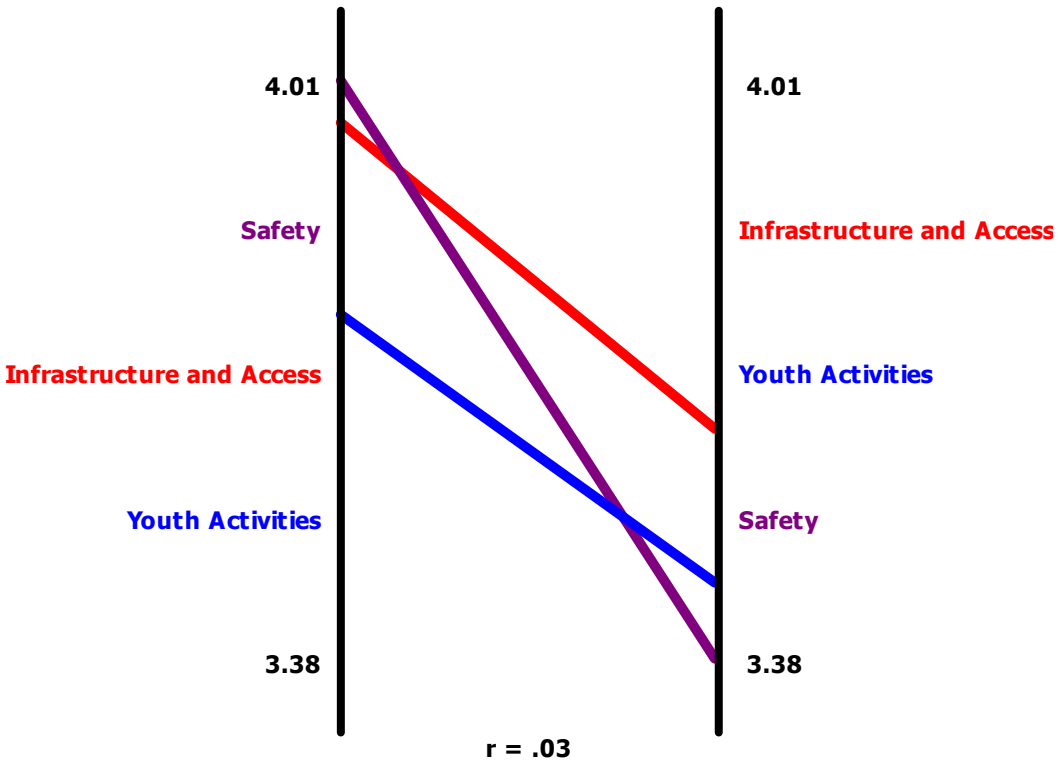


Figure IV.21 Pattern Match Comparing Black (left) and White (right) Adult Ranking of Intervention Needs

This third pattern match (Figure IV.21) compares black and white adult ratings of the different intervention clusters, showing nearly no agreement (Pearson Correlation coefficient 0.03) between perceived intervention needs. Black adults thought safety was most important and youth activities least important. White adults thought Infrastructure/access interventions were most important and safety interventions least important. Together, the last three pattern matches show although equal number of Latino, black and white adult participants were sampled from each of the three safety contexts, Latino and black participants had similar ratings of what was needed, while white participants thought all interventions were less needed, and that safety interventions were least needed. Latino and black adults thought safety interventions were relatively more needed.

Summary of Concept Mapping Need Analysis Comparisons. Within the safest context, each demographic group examined, youths as well as black, white and Latino adults, agreed safety interventions are least of the needed interventions. Youth in the least safe contexts also rated safety interventions as least needed. However adults within the least safe contexts rated safety interventions as most needed, but black and Latino adults thought safety interventions were more needed than white adults in these contexts. Another notable difference between the adult cluster ratings is that Latino and black participants rated all interventions as more needed than any intervention need rating of the white participants. Participants in the less safe contexts rated all interventions as more needed than any of the interventions rated by adults in the safest context.

Concept Mapping Adult Possibility Comparisons. In addition to the need rating, participants were also asked to rate how possible it would be to implement each intervention. Below there is a cluster rating map for each of the following: all adults, all children, all white adults, all black adults, all Latino adults, all context 1 adults, all context 2 adults and all context 3 adults. Overall, adults thought safety interventions would be the most possible (i.e., feasible) interventions to implement, with youth activities second most feasible, and infrastructure access interventions as the least possible set of interventions to implement (Figure IV.22). Interestingly, the interventions adults thought were most needed, infrastructure access interventions, were reported here as the least feasible to implement.

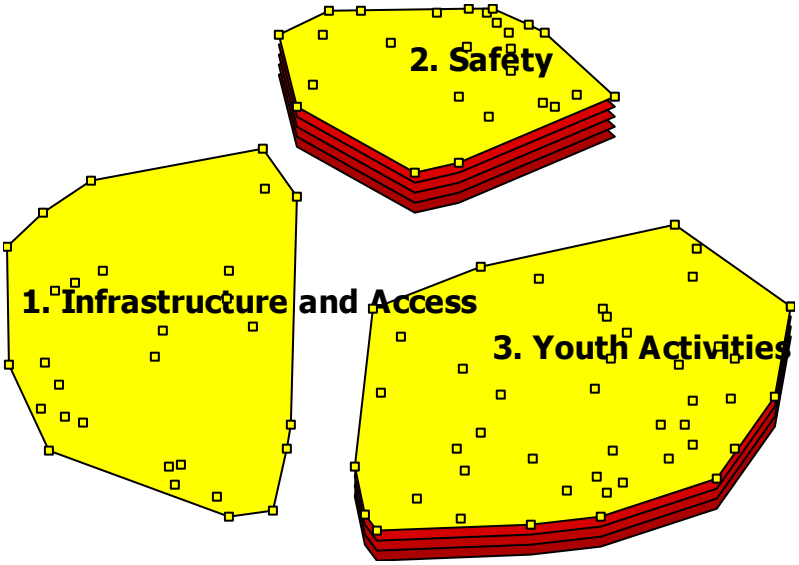


Figure IV.22 Relative Intervention Feasibility Rating Among All Adults.

Youth ratings contrasted with adult ratings of what was feasible. Youth thought activity interventions would be most possible to implement, and safety interventions would be least feasible to implement (Figure IV.23).

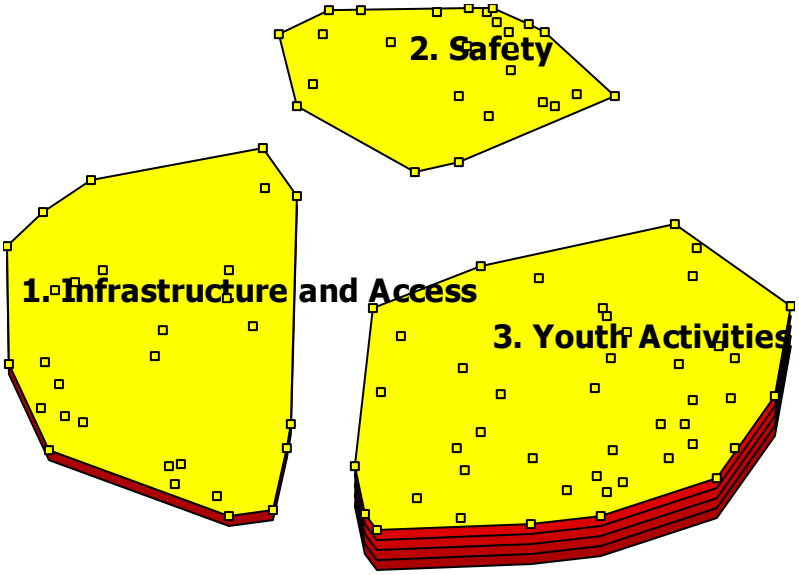


Figure IV.23 Relative Intervention Feasibility Rating Among All Youths.

Breaking down the adult population into different racial/ethnic groups, each ethnic racial group rated safety interventions as the most feasible, of all the intervention clusters to implement (Figures IV.24-IV.26).

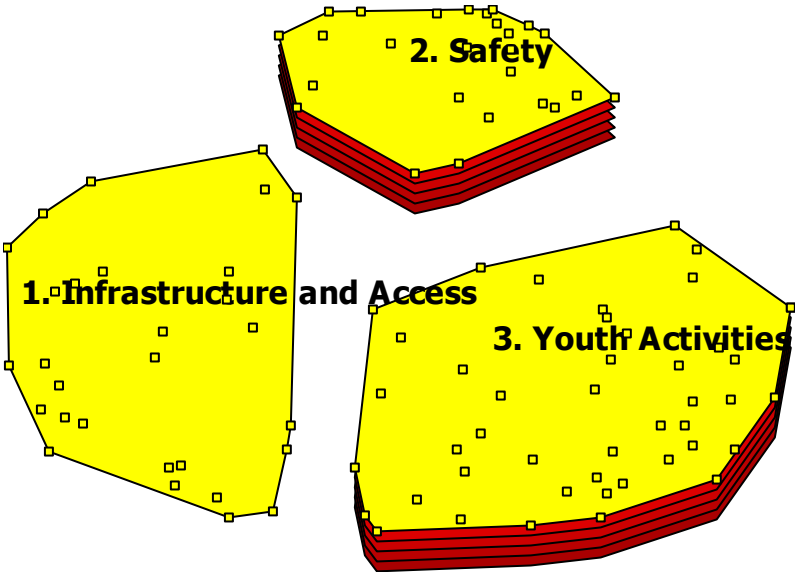


Figure IV.24 Relative Intervention Feasibility Rating Among All White Adults.

Figure IV.24 shows white adults thought both safety and activity interventions were most feasible to implement.

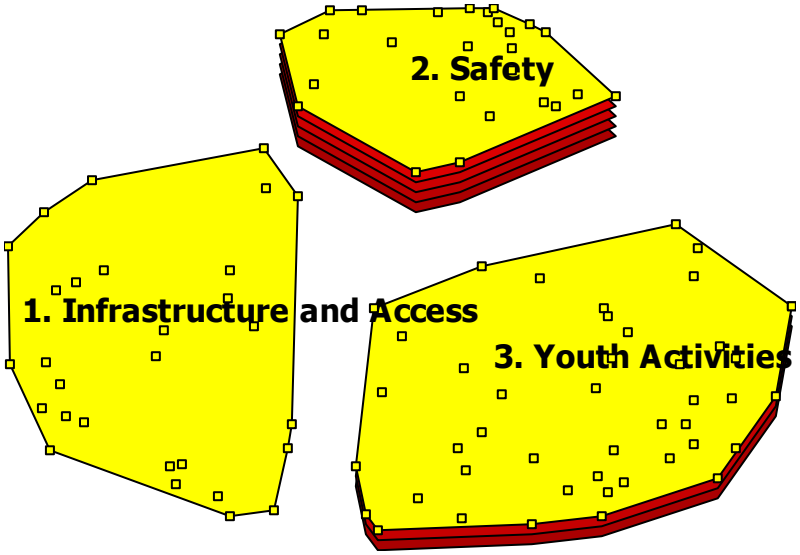


Figure IV.25 Relative Intervention Feasibility Rating Among Black Adults.

Black adults thought safety interventions were most feasible to implement, followed by youth activities (Figure IV.25)

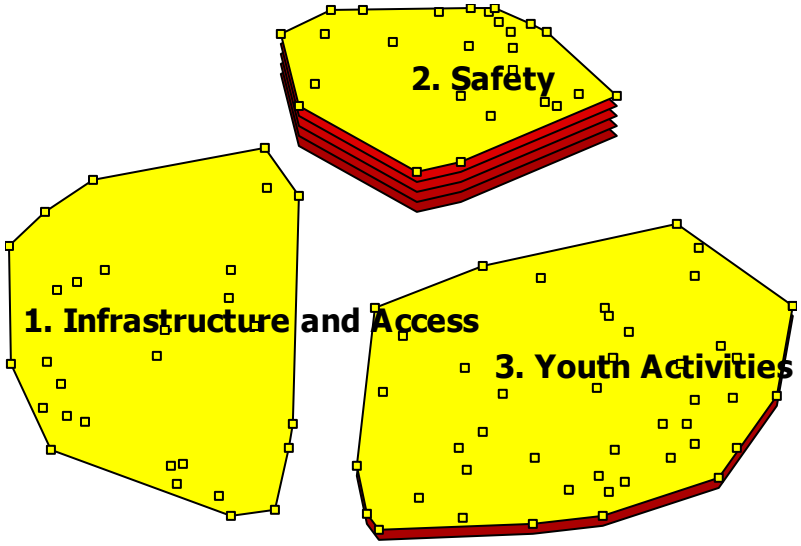


Figure IV.26 Relative Intervention Feasibility Rating Among Latino Adults.

Figure IV.26 shows Latino adults, similar to black adults thought safety interventions were the most feasible to implement, with youth activity interventions next most possible to implement.

Next, the following three maps (Figures IV.27-IV.29) show the relative feasibility of implementing the three intervention clusters by safety context. In the two safest contexts (contexts 1 and 2), safety interventions are seen as among the most feasible interventions to implement. Adults in the safest context also thought youth activity interventions were feasible to implement. In the least safe context safety interventions were seen as slightly less feasible to implement than youth activity interventions.

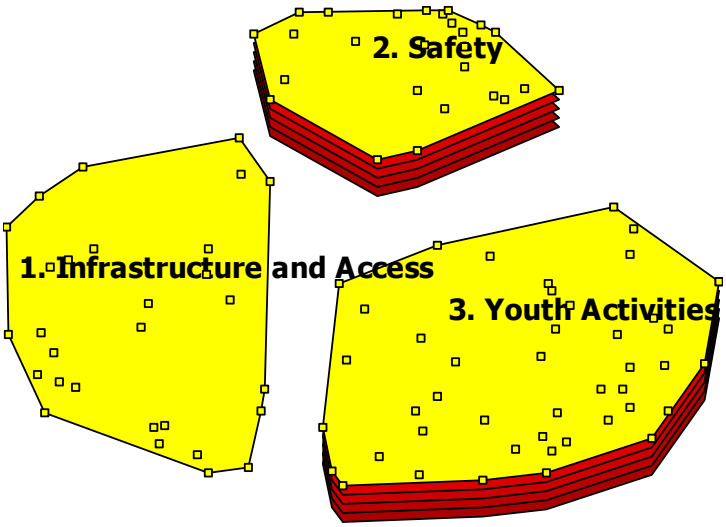


Figure IV.27 Relative Intervention Feasibility Rating Among Adults in the Safest Context.

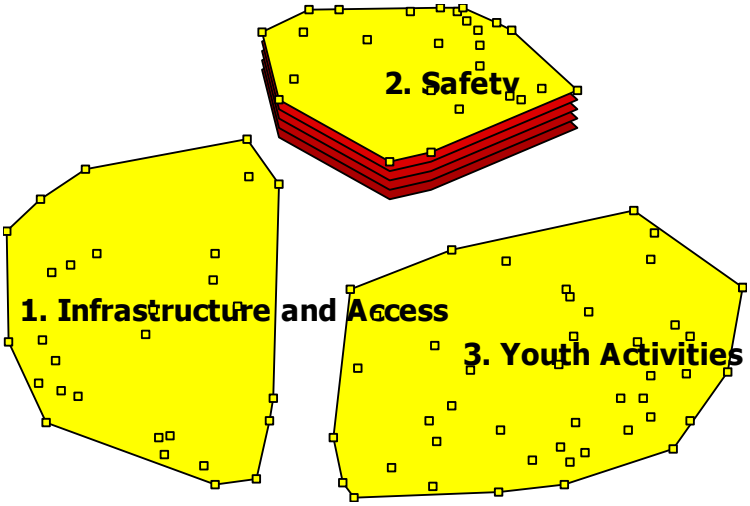


Figure IV.28 Relative Intervention Feasibility Rating Among Adults in the Second Safest Context.

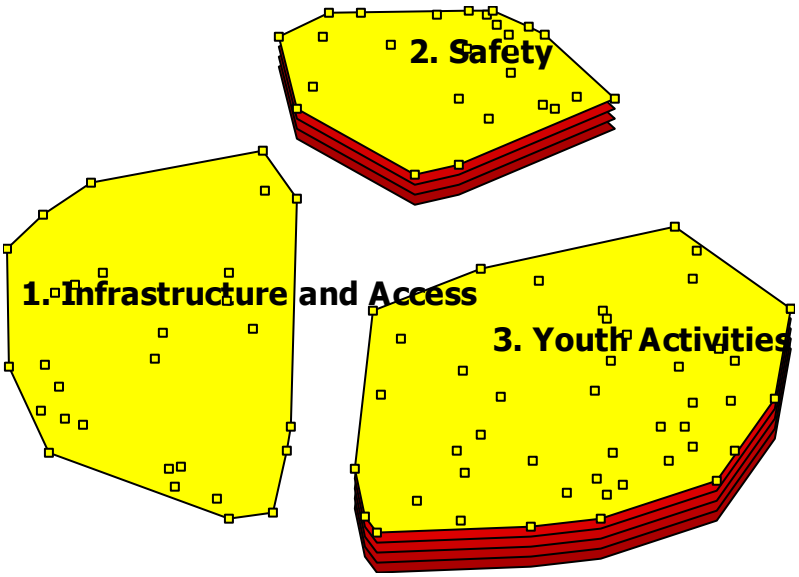


Figure IV.29 Relative Intervention Feasibility Rating Among Adults in the Least Safe Context.

Perhaps most notable about these feasibility ratings is that the overall most needed intervention, infrastructure/access interventions were perceived as least feasible to implement. While taking the survey several people commented that in the current economic climate, infrastructure/access interventions would not be a priority.

Community-Generated Analyses for Action

The CAC participants were not interested in separating out the needs of the adjacent communities by safety context or race/ethnicity. Instead, the consistent intervention ratings by youth across contexts were noted by the CAC and they asked, "What do children across the different contexts say is needed to increase physical activity?" The CAC also wanted to honor the perceptions of what adults thought were feasible interventions in their analyses. So instead of using concept maps or pattern matches that were relatively difficult to interpret, they were interested in looking at data by "go-zones." Go-zones are a third type of analysis available in the concept mapping

software. Go-zone analyses need not use intervention clusters at all, but can instead plot each individual intervention using an x-y coordinate plane.

In Figure IV.30 below the youth intervention need rating is on the x axis and the adult feasibility rating is on the y axis. The x and y axis intersect at the mid-point of the range for each respective scale. So interventions to the right of the y-axis are interventions youth rated as having an above-average need. Similarly, the interventions above the x-axis were rated by adults as having a higher than average feasibility rating. Therefore the green zone or the "go-zone" includes the ideas that are rated as above average in need according to youth and above average feasibility according to adults.

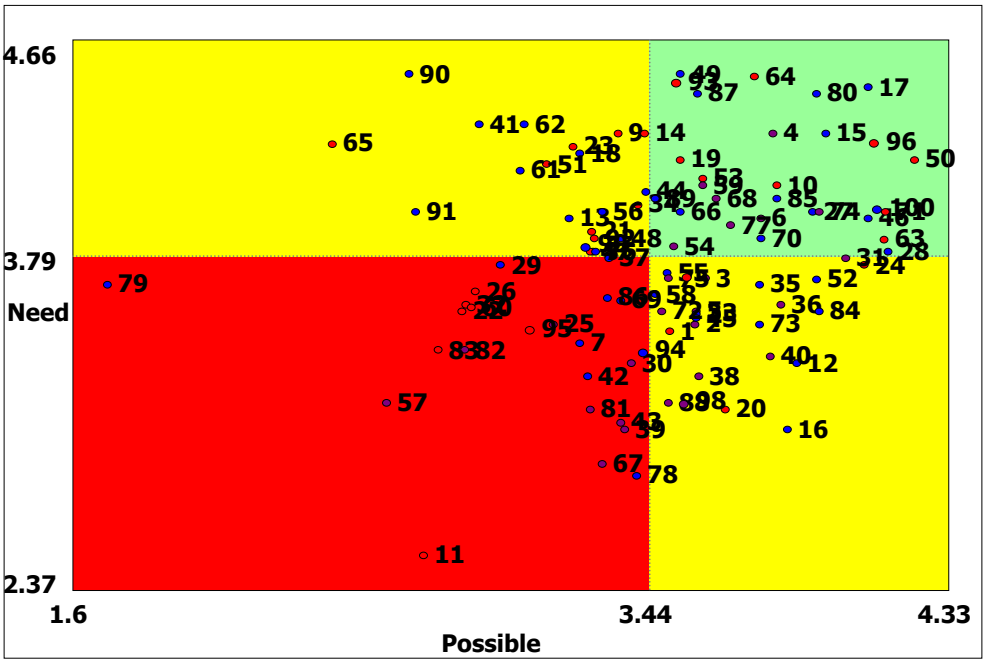


Figure IV.30 Go-Zones Examining What Youth Say is Needed and What Adults Say is Possible.

The CAC examined the ideas in the go-zone, especially the top twenty needs identified by youth that were still thought feasible by the adults (Table IV.10). Similar ideas were combined and grouped into the themes of fun, free and safe (See Table IV.11).

The community group also decided that rather than showing the go-zones, it could present the top themes in the form of a play or skit. Two youth led the effort to write the script and the youth practiced for several months. Just prior to the neighborhood health summit held by Partners for Health 2040, who had scheduled the U.S. Surgeon general to speak, the group was invited to present their skit to this large audience (Appendix 9). A colleague then introduced the group to an actor with Kaiser Permanente's Educational Theatre Program, Samuel Wood, who offered to help stage the skit. Another colleague, Ira Gorman, offered data from his study to compliment the skit, slides underlining the need for fun, free and safe opportunities for youth. A summary of the methods and results were presented in a PowerPoint slide, followed by the skit with all the CAC participants. The presentation was attended by both the head of the Colorado Department of Public Health and the Environment, as well as one of our state representatives.

Table IV.10 Go-Zone Ideas Listed in Order of Highest to Lowest Youth Needs.

49. Make available free or reduced price rentable sports or activity equipment
64. Have a recreation center with free activities
17. Have kids do activities like Sports
80. Have free youth activity time at the rec centers for swimming, basketball and other activities
87. Give prizes to encourage physical activity
96. Unlock school playgrounds so they can be used after school hours and during breaks
4. Have “responsible” parents and adults in the park and neighborhoods to watch over kids
15. Go to the pool
19. Make playgrounds better with different equipment, like zip lines and more creative stuff
50. Have parents take children to the park
53. Provide more physical activities in schools
59. Make a safe place for kids to go during summer or spring breaks
10. Have parents get their children involved
100. Get a group of kids together to organize and advertise youth events (with flyers or word-of-mouth)
68. Protect children from traffic
85. Have kids involved with after-school activities because they are safe
89. Have music, block parties to draw people out
27 Make basketball tournaments
66. Create more sports and activities for kids
71. Have people talk at back-to-school night to tell others about opportunities to be active

Table IV.11 Go-Zone Ideas Listed in Categories of Fun, Free and Safe Needs.

Fun
17. Have kids do activities like sports
87. Give prizes to encourage physical activity
15. Go to the pool
19. Make playgrounds better with different equipment, like zip lines and more creative stuff
53. Provide more physical activities in schools
100. Get a group of kids together to organize and advertise youth events (with flyers or word-of-mouth)
89. Have music, block parties to draw people out
27 Make basketball tournaments
66. Create more sports and activities for kids
71. Have people talk at back-to-school night to tell others about opportunities to be active

Free/Accessible
49. Make available free or reduced price rentable sports or activity equipment
64. Have a recreation center with free activities
80. Have free youth activity time at the rec centers for swimming, basketball and other activities
96. Unlock school playgrounds so they can be used after school hours and during breaks

Safe
4. Have "responsible" parents and adults in the park and neighborhoods to watch over kids
50. Have parents take children to the park
59. Make a safe place for kids to go during summer or spring breaks
10. Have parents get their children involved
68. Protect children from traffic
85. Have kids involved with after-school activities because they are safe

CHAPTER V

DISCUSSION

In the ensuing discussion I first review the study findings and then interpret these results within the background theory and the context of previous research. Finally I offer limitations and reflections on this study.

Review of Study Findings

This study set out to answer the question of whether interventions to increase youth physical activity need to be tailored for different safety contexts. To answer this question, I used secondary data, specifically combining fear of crime, traffic safety, social cohesion, discrimination and incivilities in a cluster analysis. This analysis identified three geographic safety contexts, fulfilling the first study aim and providing the needed safety context variable for the second study aim.

The second aim of the study was to use a community-based participatory research approach, and concept mapping methodologies to examine how *solutions* for increasing pediatric physical activity vary within and between different safety contexts. The first hypothesis of this aim was: people in environments defined as being safe, having high levels of perceived safety and social cohesion and low measures of incivilities and discrimination will offer more solutions for increasing physical activity that are unrelated to the safety environment. A community advisory counsel was formed to advise and facilitate concept mapping within a community based participatory research framework. Residents from the three safety contexts were purposefully recruited to engage in concept mapping. Eleven groups were held including 62 participants who generated 330 suggestions, answering the question, “What changes would increase physical activity

among 10-14 year old children in your neighborhood?" Thirty percent of the intervention ideas suggested by participants in the two less safe contexts addressed safety, whereas only thirteen percent of the ideas from the participants in the safest context addressed safety, thus supporting the first study hypothesis. Safety was more relevant to the people from the less than more safe contexts.

Next, one-hundred of these 330 solutions were randomly selected for the sorting and rating concept mapping phases. The randomly selected solutions were sorted by 17 people. Then the solutions were rated by 132 participants who were sampled from each of three safety contexts, with equal numbers of white, black and Latino adults from each safety context, and their children. Sorting the ideas resulted in three intervention clusters: 1) safety interventions, 2) infrastructure/access interventions and 3) activity interventions.

The second study hypothesis was that the geographic safety context would account for more variability in the need for interventions than would individual demographic differences. Multivariable analyses showed safety interventions were perceived as more needed by participants in less safe contexts compared to participants in more safe contexts. Analyses also showed safety interventions were perceived as more needed by adults than children and more needed by black and Latino participants compared to white participants. Results therefore showed that context, ethnicity and age group each independently influenced the perceived need for safety interventions. Yet context accounted for more variability in the rating of safety interventions than race/ethnicity or age. Thus the second study hypothesis was also confirmed, showing that context, more than ethnicity or age group, accounts for perceived safety intervention needs.

Because safety context may have been an indicator of a more general need for all types of interventions, similar multivariable analyses of the two other intervention clusters were conducted. These analyses showed that context had an independent effect on the need for each type of intervention. Participants from less safe contexts described each cluster of interventions as more needed than the participants from safer contexts.

Considering these fairly complex findings, the CAC chose to focus community feedback on a simpler "go-zone" analysis that emphasized the needs expressed by youth, the ultimate intervention target. In their analysis, they looked at the concept mapping "go-zone" examining what children say is most needed across contexts, and what adults say is possible or feasible. The "go-zone" showed needed and feasible interventions to increase youth physical activity could be categorized as interventions that make physical activity fun, free and safe. Notably these go-zone categories are essentially synonymous with the concept mapping clusters where the go-zone "safe" theme approximates the "safety" concept mapping cluster. The "free" theme approximates "infrastructure access", and "fun" approximates the "activity interventions" cluster. These results were summarized in a play created and presented by the CAC.

Of primary importance to this CBPR solution-oriented project is how to apply these results to interventions that make a difference for youth in the neighborhoods. The CAC chose the theme of fun, free and safe interventions that applied to all contexts rather than singling out or stigmatizing specific neighborhoods by pointing out their greater needs, or by focusing especially on safety intervention needs. CAC participants have repeatedly shown more interest in working in less safe compared to more safe neighborhoods because they acknowledge more needs there. Yet they don't want to

present data, especially maps that would stigmatize neighborhoods as less safe or focus on safety interventions alone. As one CAC member put it:

> In order for kids to get more active you have to address the safety issue, but you really are focused on getting them active. There are other issues like making things free that are important. If you get parents together to take equipment to the park you take care of all three things, providing fun, free and safe activities. Or if you create more activities for people to participate in, like a basketball tournament, you address all three concepts at the same time. This creates more focus on the positive (getting kids active), but you are still in a subtle way addressing safety too. If you get more positive things happening it will push out negative things. We don't need police lining the parks. If there are people always playing sports in the parks, then people doing negative things will find somewhere else to go.

This seems to encapsulate the difference between a problem-oriented (stopping something negative) and solution-oriented approach (promoting something positive). Both interventions might improve neighborhood safety. The difference is that unlike the solution-oriented approach, the problem-oriented approach leaves in its wake a stigmatized neighborhood. The go-zone themes, "fun, free and safe", frames a solution-oriented approach that recognizes safety as an issue, but doesn't make it the exclusive focus of attention.

The remainder of this chapter will explore these findings in more detail, including how these results can be applied to intervention efforts to improve physical activity among youth.

Interpretation of Study Aim 1 Findings

While other studies have examined whether individual activity levels are associated with individual perceptions or contextual measures of safety, [92,78, 123, 86] this is the first study to define safety context in exactly this way, using fear of crime, traffic safety, social cohesion, discrimination and incivilities. This conceptualization blends

perceptual and objective measures of safety, building on other studies that use perceptions [87] [178] [92, 123] [81, 179] or objective measures of safety. [88, 180] Social cohesion, a subscale of collective efficacy was included and varied with the other factors in the expected direction. Also, similar to Romero's inclusion of prejudice as a neighborhood "hazard," this study also included discrimination as an aspect of safety. Because discrimination didn't follow the expected tiered pattern in the analyses, the cluster analysis was run with and without discrimination included in the analysis. Including discrimination in the conceptualization of safety strengthened the model, and was therefore included.

As it relates to the social ecological framework for this study (Figure V.1), this analysis combined aspects of the physical environment, i.e., incivilities and traffic safety, with the social environment, i.e., fear of crime, social cohesion and discrimination.

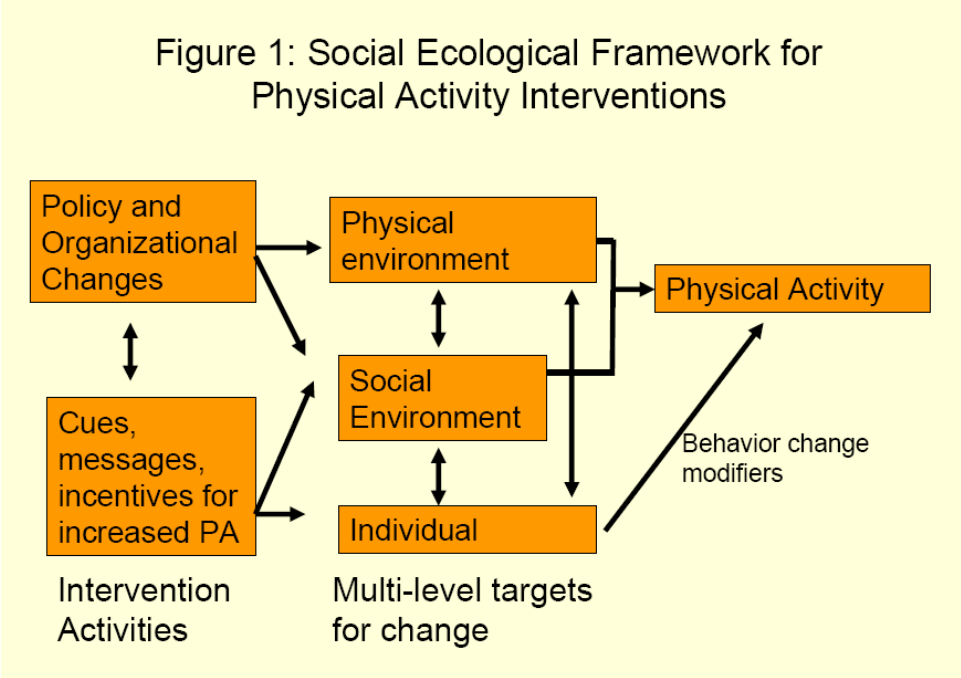


Figure V.1 Social Ecological Framework for Physical Activity Interventions.

As this first study aim was designed as a requisite step for defining distinct geographic areas with distinct safety ratings, and was not associated with any specific hypotheses, the most relevant issue for this first aim is whether the identified geographic safety contexts have face validity. Context 1 had the highest level of all the variables, freedom from: fear of crime, discrimination, incivilities and traffic concerns, and the highest level of social cohesion. Context 2 enjoyed the next highest levels of all these variables, except freedom from discrimination, and Context 3 had the lowest levels of these variables, except freedom of discrimination. Thus all variables followed expected trends with the exception of discrimination, where there was more freedom from discrimination in Context 2 than in Context 3. Although the cluster analysis distinguished Context 2 from Context 3, both clusters rated all intervention groupings similarly and were collapsed in most of the later analyses.

The validity of the contexts identified in this study is supported by their consistency with two correlates of safety: transience and cultural heterogeneity. Safety and transience‡ are correlated,[96] and recruitment data from this study showed the safest context was associated with the least amount of transience, where only 9.1% (4/44) of attempted households had moved, compared to 38.7% (24/62) in context 2 and 33.3% (20/60) in context 3. Thus, rates of transience support the finding that Context 1 was seen by its residents as safer than contexts 2 and 3.

Cultural heterogeneity is also thought to relate safety. Merry suggests people feel safer in culturally homogenous neighborhoods because they understand and can navigate social norms and threats more easily.[148] In a more critical analysis of why cultural

‡ Transience is defined as the percentage of people who had moved newly into the neighborhood in the last year.

heterogeneity is related to lower perceptions of safety, Blalock proposes a social threat effect.[181] According to Blalock, majority (white, male, powerful groups in whatever context) populations are threatened by minority (especially black male) populations and will impose means of formal control to keep minority populations from threatening their power. This is consistent with other authors descriptions of a racialized fear of crime.[182] [183]

While analysis of the representative demographic data for each block group was outside the scope of this study, another researcher using data from this same catchment area confirmed "people living on blocks that are more diverse reported lower perceptions of safety." [170, pg. 115] In the present study, Context 1 overlapped primarily with neighborhoods with majority white residents and Contexts 2 and 3 overlapped with more ethnically diverse neighborhoods. Thus, the geographic safety contexts were consistent with expected trends in transience and cultural heterogeneity suggesting distinct neighborhood safety contexts were identified by the cluster analysis conducted here.

Interpretation of Study Aim 2 Findings

This is the first study to purposefully compare how residents within and between different safety contexts prioritize resident-suggested interventions to increase youth physical activity. These findings are consistent with, but offer important contributions to a broad range of literature suggesting the importance of safety in improving physical activity among youth.[65, 70, 123, 184-186]

Revised Socio-Ecological Framework. The initial socio-ecological framework used to conceptualize this study is revised to be consistent with study findings, as shown in Figure V.2. In this figure the physical and social environments combine to comprise

the safety context. The wide solid arrow between safety context and perceived need for safety interventions represents the largest independent association found in this study, that between safety contexts and perceived need for different interventions. The more narrow solid line between individual factors and perceived needs represents the relatively smaller association between these attributes. The dotted line between safety context and individual factors suggests a modifying effect of individual characteristics by safety context, a result suggested by the concept mapping results but not formally tested in statistical analysis. Though untested, the broader social/economic/political context is shown to embed each of the model components. This model suggests that interventions need to be tailored for the socio-ecologic context, especially the safety context.

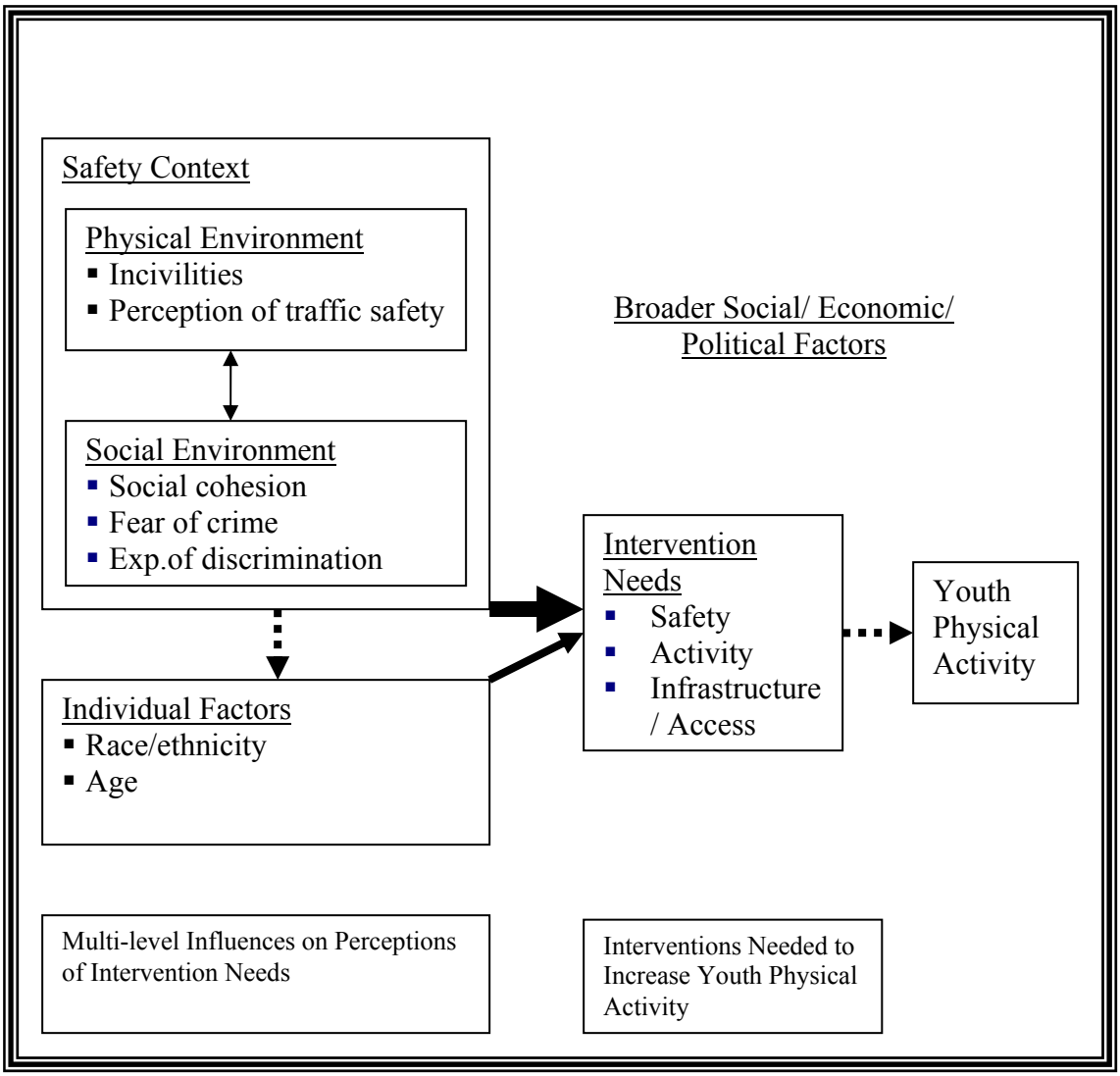


Figure V.2 Revised Social Ecological Framework for Physical Activity Interventions.

These results suggest interventions for increasing physical activity need to account for the safety context. But why? One participant from a less safe context, when reminded to use the entire range of the scale while rating the need for different interventions, in a sense explaining why she was not using the lower range of the scale said, "we just need everything so much." This is especially interesting because the different contexts are adjacent to one another; there are three recreation centers in the less safe contexts and one recently-built recreation center in the safest context. While some

literature shows people in lower income areas have fewer activity opportunities, this may not be the case in all areas.[107] Also perceptions of access do not necessarily match material facts, for instance GIS measures of sidewalks, recreation facilities, and crime did not match perceptions of these attributes.[76] Additionally, Suminski et al. found lower income neighborhoods in their catchment area had "more locations, but similar quantities of amenities, more faith-based locations and court, trail/path, event and water-type amenities. Higher income neighborhoods had more for-profit businesses offering physical activity opportunities."[107, p.599]

Therefore a deeper exploration of these perceptions would be of interest. Might the safety context be associated with the "invisible lines" separating the communities in the present study, lines that correspond roughly to neighborhood socio-economic status? If that were true, people sharing infrastructure can still have different levels of accessibility. There is anecdotal support for this hypothesis because in conversations with activity organizers at the local recreation center, they explained that youth can get a free membership to the recreation center, but activity fees can be cost-prohibitive for some families. Underlining this economic difference, people from the safest context, both children and adults suggested children need time free from structured extra-curricular activities, while participants from less safe contexts talked about costs and transportation as barriers to extra-curricular engagement. Though the socio-economic associations with safety context were not formally tested in this study, this contrast would be consistent with intersectional theory that describes how race, class, and gender inequities intersect, such that shared infrastructure would not guarantee equitable access.

While adults in the least safe context thought each intervention cluster was more needed than adults in the safest context, adults in the least safe context also thought safety interventions were relatively more important than activity interventions. When asked to interpret why adults in the least safe contexts were least likely to support activity interventions, CAC members talked about how some neighbors were untrustworthy and so in some cases it was not appropriate to create more activities for their children to interact with neighbors. In fact one CAC member talked about developing strategies to be sure her child did not play with other children in their neighborhood. This interpretation is similar to findings by others,[187] suggesting parents may limit children's outdoor activity because of their safety concerns. Thus the independent effect of safety context on perceived intervention needs is further clarified.

Perceived Needs Influenced by Individual Factors. The revised framework in Figure V.2 also shows that individual characteristics influenced perceived intervention needs. In this study youth, adults, black, white and Latino participants within similar contexts had some differences in perceived intervention needs.

While adults' ratings of needed interventions varied by safety context, youth from all safety contexts ranked intervention needs similarly. Youth uniformly rated activity and infrastructure/access interventions as most and equally needed, and safety interventions as least needed. Yet, in the community-suggested analyses, some of the top youth-rated interventions included parental or adult supervision. When these results were reviewed by the CAC, youth pointed out that having parents in the parks, something included in both the infrastructure/access and activity solution clusters confers a sense of safety. So safety may be important, but in the minds of youth it may be accomplished

through more informal social control. This method of ensuring personal safety is consistent with "routine activity theory" where guardians (who protect potential victims, e.g., parents) or place managers (who are interested in smooth operations, e.g., park and recreation center attendants) and handlers (people who discourage potential offenders, e.g., coaches)[188] ensure safety. Importantly, this type of informal social control, provided by afterschool supervision in playgrounds has been shown to increase youth physical activity. [71]

While we can understand that youth thought formal safety interventions were less relevant than their adult counterparts, the differences in perceived intervention needs between "racial" or ethnic groups, requires deeper examination. In many studies, differences in perceptions and outcomes between racial, ethnic and socio-economic groups might be attributed to these groups living in different environments due to residential segregation along economic and ethnic/racial lines.[52 77] Related research can use multivariable analyses to "control for" some differences in the environments, e.g. quality of the recreation centers, width of sidewalks, etc. Yet differences in racial or ethnic group perceptions and outcomes might still be attributed to an unmeasured confounding environmental factor. The present study overcomes this important limitation by purposefully sampling equal numbers of adults from three different ethnic groups within each safety context so the presence of ethnic "tastes" or intervention preferences could be explored within and between common geographic contexts. Yet still, there were differences in perceived intervention needs by racial/ethnic group with white participants expressing less need for safety interventions compared to their black and Latino counterparts.

These analyses highlight the different perceptions of people from different age groups, ethnic/racial groups and safety contexts. Yet as Frohlich, Corin and Potvin (2001) suggest,[128] stopping there, does little to help address the issues. Therefore I turn now to the deeper theory undergirding this study, including Bourdieu's theory of *habitus*. At the outset of this study I recognized that my measure of safety, or at least the specific measures used therein, might be a measure of a certain type of *habitus*. For example the measure of social cohesion used here is consistent with dominant societal conceptions of what pro-social cohesion is. Additionally experiences of discrimination, which could be interpreted as a lack of dominant society's cultural capital, would separate people who do and don't experience discrimination in our society. Indeed, the safest context identified in this study overlaps considerably with the more economically privileged portions of the included catchment area and with the most homogeneous white population in the catchment area, which may have the most cultural capital, e.g., competencies, skills and qualifications that are rewarded in the existing social structures. Therefore it does seem that the cluster analysis using safety-related measures, including fear of crime, traffic safety, incivilities, a pro-social measure of social cohesion and discrimination, differentiated this economically/socially privileged section of the catchment area from its neighbors. Yet the safety context alone did not fully capture the unique *doxa*s or ways of understanding the ways that things just are, it didn't fully identify distinct *habitus*. These findings also underline the limitations of using "race" or ethnicity as a social epidemiological variable without further understanding.

In this study being "white" contributed to a different way of seeing things. White adults thought safety interventions were less needed than Latino and black participants

living in the same contexts. White adults, relative to black and Latino adults, thought all interventions were less needed, even living in the same contexts. It may be these groups have different levels of social support, economic advantage, coping skills or resiliency, or it may be a deeper sociological phenomenon. Future research to closer explore the lived experiences of residents from different ethnic backgrounds in the same context, a phenomenological exploration, may point to various ways the group *doxas* are constructed. Understanding these *doxas*, much like understanding the need this community expressed to address safety more subtly within the context of positive activities, opens doors to more effective interventions to address disparities.

CBPR as a Social Change Project. This study is consistent with third generation disparities research[189] and a solution-oriented research paradigm that focuses on which interventions should be prioritized for whom, instead of identifying causes and correlates of diseases and risk factors.[190] Compared to a Northern CBPR process, this study was also more theoretically aligned with the Southern, emancipatory, approach. The results of this CBPR process are discussed contrasting how the study process and results would have differed if the process had been completed within a more Northern approach.

Unlike a Global Northern approach that would have included grass-tops people, e.g., heads of services and policy makers,[191] except for University researchers and a Kaiser Permanente theater professional, this study included grassroots residents exclusively. Community members living in more and less safe contexts engaged in a communicative discourse,[157] working together to improve skills and understanding of research and community needs. One of the community members from this group was

very vocal in not wanting to engage grass-tops participants, essentially knowing that grass-tops stakeholder priorities could "drown out" the "grassroots." This group wanted resident voices to be heard. This is important as grass-tops and grassroots constituencies have been known to have different priorities. [192-194] [195, 196] [197] Given the opportunity to choose how to analyze the research data, the CAC chose not to focus community presentations on the differences between neighborhoods, especially the differential need for safety interventions that could stigmatize neighborhoods. Instead this group conducted analyses that could unite neighborhoods for action by focusing on what children say is needed. The importance of this contribution cannot be underestimated because it speaks to a certain level of political astuteness, recognizing that by allowing results to reify perceptions of neighborhood safety, they could in fact adversely impact physical activity, the very behavior this research seeks to ultimately improve. Rather they were interested in addressing safety through more comprehensive strategies that provide positive things that could unite the community, e.g., parents in parks, open playgrounds (where safety would also need to be assured). Had this CAC included more grass-tops participation, I am not sure theirs concern would have been expressed by the residents, or that the residents would have been able to decide how the study results were presented.

Therefore this more Southern CBPR approach demonstrated the clear strength and ownership of residents in this process, even choosing how to analyze and present data. Research has shown that engaging members of target communities in designing and owning policy solutions results in more sustainable interventions to improve physical activity.[53, 54] While grass-tops participants e.g., school administrators, recreation center

staff, other relevant non-profits, have been shown to focus more on policy and environmental changes, parents focus on more tangible needs, e.g., creating accessible activities. [193] [198] On its own initiative the CAC wanted to provide for tangible needs, first pursuing a $500 community grant to get kids active during the summer. The group, this time headed by youth, wrote a grant that wasn't funded, but still the group showed up each month in a local park to play with kids and offer prizes for their participation. After that experience, recognizing the group wasn't trained or really experienced in youth development/activity coordination, the group wrote another grant that was funded for $500 to create an activity fair bringing together different activity providers in the neighborhoods to publicize the fun, free and safe activities that were available for youth. Thus the grassroots CAC did ultimately work on addressing tangible needs, rather than policy intervention changes.

Still one of the top solutions in the go-zone was especially related to policy change. Residents were interested in assuring physical education in schools. Had grass-top participants such as policy makers been included in the CAC, one wonders whether the results of the study may have moved more efficiently into policy changes.[199] Coincidentally, when our results came out there was a bill in the state legislature concerning physical education in schools. A policy brief that was created (Appendix10) and shared with an RWJF policy consultant, was then shared with one of the coalitions favoring Colorado HB11-1069, CONCERNING MEASURES TO INCREASE PHYSICAL ACTIVITY IN PUBLIC SCHOOLS, a bill that was signed into law in April 2011. The coalition for the bill was fairly confident their efforts would result in its passage, so the policy brief was not distributed further. The bill was recognized as a first

step in getting physical education requirements in the school, but is recognized as not sufficiently strong. Recognizing the opportunity to engage in policy change, the CAC partnered with various people to submit a grant proposal that would have provided additional advocacy training and experience for our group, but it was not funded. Thus it may not be that grassroots groups are uninterested in advocacy efforts, it may be more that these constituencies need skills (cultural capital) to engage and further their empowerment consistent with the Southern CBPR tradition. Experience from tobacco advocacy efforts have shown the efficacy of engaging youth as policy change agents, funding to engage youth to address obesity-related policies seems promising.

A core group participating in this effort has been extremely dedicated, coming with and without incentives to participate, investing their own time and money to contribute to the group. Despite this high level of dedication within the group, it is important to note that there was attrition in the group, especially in the last year, particularly when the team began to act to implement intervention priorities identified by the study. In this phase there was a perception by one family that not everyone was helping sufficiently, and that family chose to take a break, which turned into a long, if note permanent, break from the group. That family had been very motivated and did a lot to engage and celebrate the children's involvement so their departure affected the entire group. Also, some of the children moved from the area or graduated high school and without funding to pursue a specific goal, it was more difficult to provide as clear a focus. The group has committed to a yearly activity fair, and is considering with the parent body other policy-related efforts it could pursue.

So which is better- the Southern or Northern approach to CBPR? This is a question that is untested in this study. Yet I can make several observations. While engaging the grass-tops as part of the CAC may have helped speed results into policy changes, it may be that these changes would have left out true grassroots opinions. Together, this discussion highlighted the drawbacks and benefits of a CBPR process consistent with the Southern approach focusing more on grassroots rather than grass tops participation.

Correspondence of Study Intervention Recommendations with National Efforts

The interventions identified in this dissertation study are both similar to CDC-recommended strategies for increasing physical activity,[49] and also suggest a broader role for grassroots participation. Building from another article demonstrating how funding links to CDC strategies,[200] this section compares CDC-recommended strategies to the dissertation findings. CDC, similar to other previously reviewed strategies, [8, 50, 121, 48] recommends three strategies, strategies to: 1) encourage physical activity or limit sedentary activity among children and youth, 2) create safe communities that support physical activity, and 3) encourage communities to organize for change. [49]

These strategies represent national efforts to address pediatric obesity, efforts recognizing the "up-stream," social determinants of health, including the social, physical, economic, cultural and community environments that shape health.[201] [102] [202] In low-income communities where discriminatory policies have been a fundamental cause of poor health,[203, 204] environmental and policy interventions have received considerable support.[34, 56, 101, 205] In the first column of Table V.1 CDC-recommended strategies for

increasing physical activity are shown. The second column indicates which CDC-recommended strategies were supported by findings from this dissertation study. The third column of the table describes how RWJF funding has recently been allocated in relationship to CDC-recommended strategies.

Table V.1 Nationally Recommended Strategies for Youth Obesity Reduction.

CDC Interventions Categories[49]	**Dissertation-supported CDC Interventions**	**RWJF-Funded, Health Kids Healthy Communities[200]**
Encourage physical activity or limit sedentary activity among children and youth 1. Require physical education in schools 2. Increase the amount of physical activity in PE programs 3. Increase opportunities for extracurricular physical activity 4. Reduce screen time in public service venues.	1, 2, 3	15/41 RWJF grantees used this CDC strategy. All four CDC-suggested areas were addressed by grantees, but most common areas were increasing physical activity opportunities outside of school, e.g., joint-use agreements with schools for expanded use and after-school program physical activity standards setting
Create safe communities that support physical activity 1. Improve access to outdoor recreation facilities, 2-3 Enhance infrastructure to support cycling and walking, 4. Support locating schools within easy walking distance of residential areas, 5. Improve public transportation access 6. Zone for mixed use, 7. Enhance personal safety in areas where people are or could be physically active, and 8. Enhance traffic safety.	1, 2-3, 5, 6, 7, 8	35/41 grantees included this strategy. Efforts included improving walking and cycling infrastructure and access to parks; revitalizing parks, and enhancing community awareness of these facilities; Safe Routes to Schools. Personal and traffic safety focused on increased police presence, improved lighting, traffic calming and crossing aids.
Encourage communities to organize for change.	Part of CBPR design	Most grantees engaged communities, esp. grass-tops

Many interventions suggested by participants in this dissertation research focused on increasing opportunities for physical activity. Like RWJF-funded strategies, participants alluded to joint-use agreements, e.g., unlocking school playgrounds so they can be used after school hours and during breaks. Similar to the CDC, a recent IOM

report also suggests improving access to amenities, e.g., opening playground and requiring physical education in schools. [8] A core concern among participants in the present study was making facilities and extra-curricular activities cost-accessible. One related strategy suggested by dissertation study participants was to stress the importance of civic participation to maintain physical education in schools. In addition to making activities cost accessible, participants also pointed to the need for activities to be safe, with many interventions in this area focusing on providing appropriate supervision for youth, including grassroots participation by parents, mentors and chaperones. These ideas overlap with CDC-recommended safety interventions that are explored next in more detail.

The next category of interventions suggested by the CDC and reviewed for consistency with RWJF funding,[200] was creating safe communities that support physical activity. The strategies identified in the current study have some similarities and differences with CDC recommendations. CDC, RWJF grantees, and participants in this study agreed on the need for traffic safety interventions, improved infrastructure to support safety, and some formal safety interventions. Again, the notion of improving adult supervision of youth was a common recommendation among dissertation study participants, something that may be embedded in the enhancing personal safety strategy recommended by the CDC, but seems worthy of highlighting.

The last strategy recommended by the CDC and reviewed relative to RWJF funding is encouraging communities to organize for change, including local government participation in community coalitions or partnerships to address obesity. This strategy seems geared specifically for grass-tops constituencies, similar to creating CBPR

partnerships comprised predominantly of agency and organizational heads. The limitations and benefits of this approach were discussed in the previous section. While the CDC and RWJF-grantees focused on formal organized activities and improving physical infrastructure, local grassroots participants in this dissertation study pointed to a large group of informal, creative, low cost activities that could engage youth to be active. Dissertation participants seemed to suggest a larger role of informal networks, consistent with the importance of the social environment,[206] a strategy that might enhance CDC's strategy of encouraging communities to organize for change.

As the CDC grouped its strategies for increasing physical activities, the CAC for this dissertation independently grouped their top-rated interventions (Table V.2). The specific interventions placed in each the fun, free and safe categories are described below. Youth had a specific category of activities they categorized as "fun." In this category are interventions to provide more access to activities, including broadening existing opportunities and letting people know about existing opportunities. Free and accessible interventions dealt especially with making activity opportunities cost accessible, providing reduced cost sports and activity equipment and opportunities, and increasing access to playgrounds after-school hours. Youth also suggested a number of strategies for keeping youth safe, including traffic safety interventions and appropriate supervision for various activities. Notably, these intervention characteristics were integrated in the community's minds. Interventions needed to be simultaneously fun, free AND safe. As discussed previously, the CAC didn't support framing interventions exclusively related to safety, but they did fully support framing interventions as a positive opportunity that would also be safe. Thus, results from this dissertation study show

community suggestions for increasing physical activity are consistent with many CDC strategies, but also suggest more informal organization within grassroots social networks holds promise for improving physical activities.

Table V.2 Go-Zone Ideas Listed in Categories of Fun, Free and Safe Needs.

Fun
17. Have kids do activities like sports
87. Give prizes to encourage physical activity
15. Go to the pool
19. Make playgrounds better with different equipment, like zip lines and more creative stuff
53. Provide more physical activities in schools
100. Get a group of kids together to organize and advertise youth events (with flyers or word-of-mouth)
89. Have music, block parties to draw people out
27 Make basketball tournaments
66. Create more sports and activities for kids
71. Have people talk at back-to-school night to tell others about opportunities to be active
Free/Accessible
49. Make available free or reduced price rentable sports or activity equipment
64. Have a recreation center with free activities
80. Have free youth activity time at the rec centers for swimming, basketball and other activities
96. Unlock school playgrounds so they can be used after school hours and during breaks
Safe
4. Have "responsible" parents and adults in the park and neighborhoods to watch over kids
50. Have parents take children to the park
59. Make a safe place for kids to go during summer or spring breaks
10. Have parents get their children involved
68. Protect children from traffic
85. Have kids involved with after-school activities because they are safe

This discussion has shown the similarities and differences between resident and national conceptualizations of intervention activities. Youth provided a very memorable framework for communicating strategies for increasing physical activity, providing opportunities that are fun, free and safe. These resident-led intervention suggestions are strikingly consistent with national initiatives. Shaping America's Youth (SAY) is the only other example I have found where rigorous methods were applied to engaging

community in identifying physical activity intervention suggestions. [193] [194] [198] Consistent with the interventions proposed by participants in this study, the top barriers identified in the SAY project included safety and appropriate spaces for physical activity, time, parental knowledge about physical activity, and parental motivation/skills; top interventions suggested by families included encouraging physical activity and connecting children to available activities.[193] Similar to the SAY study, [198] this dissertation confirms grassroots residents, especially youth, can be essential partners in identifying intervention needs. Expanding CDC's strategy of encouraging communities to organize for change to purposefully engage grassroots residents in forums similar to SAY or this study, holds promise for improving youth physical activity.

Reflections

This CBPR project has provided a mirror to me as a researcher. I live in the study catchment area, but before working on this project, I lived in my neighborhood, but was not part of my neighborhood in the same way. Through this study I was able to meld CBPR methods, community organizing and social justice and a love for children. Through this research I experienced at a very personal and profound way that still I approached issues of social justice from a genuine heart-felt, but also very privileged, and reasoned lens.

Going into this study I also assumed that disparities in obesity rates between white, black and Latino youth were related to physical activity. Thus improving physical activity could help reduce obesity rates. I hypothesized safety contexts, that would likely correspond to socio-economic differences I know about the neighborhoods, would be evident from the cluster analyses. Then I assumed that where a person lives, more than

the color of their skin, would determine how needed they thought interventions were, corresponding to a materialist analysis. Evidencing these disparities within a CBPR context would mean that then the grassroots group formed to do the research could use the study results to advocate for the changes they want to see, advocating for more resources as needed. Or, I thought, maybe people at the grassroots level would say, "No, we don't need more buildings, we want to get together with our neighbors and forge tighter connections with each other because we are powerful people who don't need the latest buildings to have healthy kids," an emancipation from the capitalist framework altogether. So those were some of my assumptions going in.

As I was rewriting the introduction to my dissertation, I looked for the latest data on obesity and physical activity, and looked again. Obesity rates were stabilizing overall, still with some disparities. Yet physical activity rates, now measured objectively rather than through self-report, showed physical activity deficits didn't mirror obesity rates. When I came into the field I took at face value that there would be fewer physical activity amenities in lower income neighborhoods compared to higher income neighborhoods. Then I read that at least in one large city the reverse was true, that public physical activity facilities were more prevalent in lower income neighborhoods, while private facilities were more available in higher income neighborhoods.

These facts challenged my previous understanding of the literature and my assumptions. This helped me realize again that I am imbedded in a field that makes its living by finding problems, especially problems among the most marginalized. The literature seems to focus on the problems "minority" youth have, even when they don't exist. For instance, even in the article that debunked previous research and showed

higher rates of physical activity among black rather than white children, still the discussion focused on the change in PA, how PA was decreasing among black children while increasing among white children. The authors found a problem among black children, though the white kids were shown to get less exercise overall. You might even say that when the disparity is a black person's disparity that it can be appropriated, i.e., funded so we can highlight and examine the underprivileged person's problem. It is a slippery slope- because my social justice bent says yes we want to make sure resources go to an area if there is a problem, but on the other hand the constant reinforcement of disparities, even when the raw facts are opposite the conclusion, just makes me realize how much benefit I derive from disparities, and especially how CBPR projects that focus on grass-tops organizing can capitalize on disparities, without challenging themselves to truly emancipatory processes. Though CAC participants would readily admit a need to improve community safety, they refused to stigmatize different safety contexts, suggesting safety needs to be integrated into other more positive-oriented interventions, making me question the tendency of research to reify perceptions of problem-areas.

Limitations

Limitations of Study Aim 1. Limitations of the cluster analysis conducted here are consistent with the original study data limitations.[99] Additionally, data collected in 2007 from Stapleton represents the people who lived in that context at that time, but not all the people who moved there between 2008 and 2010.

Limitations for Aim 2. Important limitations in interpreting results from the first aim is that there were only two intervention generating groups from the safest context, one adult and one child group. Also in the Spanish-speaking groups and one youth

group, friends or neighbors were invited to the group so not all the participants were part of our random survey sample. Also, at least one of the Spanish-speaking groups was led by a facilitator who was somewhat leading in his discussion, which may have solicited more safety intervention suggestions than what would have happened otherwise. Another limitation as well as strength of the study was that the concept generating sessions were not all conducted by the same facilitator so differences in the percentage of brainstormed interventions related to safety may be related to different facilitator styles or biases. Though these are important limitations of the brainstorming phase, in the rating phase of concept mapping these limitations were not present. Together these two study phases provide consistent results, suggesting black and Latino adult residents and adults from less safe contexts think safety and infrastructure/access interventions are most needed.

Another limitation of this study was that the initial study design intended to engage a consistent group of people in each concept mapping phase, and thereby build investment in the study results among a larger constituency. Because our recruitment efforts did not yield a sufficient number of people to come to community meetings, we chose to do the rating phase of the study through individual interviews. Though study participants were invited to a large community forum to learn the results of the research, it didn't seem that many of the rating participants participated. So feedback about the results and offers to help implement the solutions came from people outside the grassroots. But internal group dynamics flared at that time and we didn't have a solid plan for how to incorporate more grass-tops participation. Therefore the process did not benefit from the consistent, developing engagement of a large group of study participants, and instead the CAC served this role. Larger grants to support policy implementation efforts were not funded

and the instead, the group focused on smaller projects in an effort to begin partnering with grass-tops organizations.

Results of this study are not generalizable outside this urban environment, but results do provide one example of both context and ethnicity independently relating to residents' views of what interventions are appropriate in different safety environments. Another limitation of this study is that the concept mapping efforts only included participants who agreed to be contacted after completing an earlier household survey. Those who did not agree to future participation and those who moved since agreeing to participate in future studies, were not represented in the concept mapping efforts. Because there were differential transience rates within the three contexts, this may have biased the results. If, however, the theory that transience is related to experiences of being less safe, it would have biased the results toward the null hypotheses, because the most stable of the residents would be those feeling safest and would have been present to participate.

Additionally, not all of the 330 brainstormed ideas were included in the sorting and rating phases of the study. The community group tried twice with different efforts to manually reduce the 330 ideas to 100 ideas and failed, so the random selection of solutions was thought the best way to select solutions without biasing the results.

A fourth limitation is that this study focuses on perceptions of what is needed in the neighborhoods and studies would be needed to test whether implementing these interventions would actually result in behavior changes, or if standard CDC-recommended interventions absent the CBPR process would be equally effective. Grassroots groups could select interventions that have minimal long-term impact, but

they may also select interventions that are much more relevant and appropriate to the community *doxa.* Prospective studies to test the relative benefit of engaging grassroots participation in intervention selection and implementation would be of interest.

Another limitation is that these data were analyzed at the block group level which may have been too gross an analytic unit to identify different *doxa*. For instance, residents living at opposite ends of the block group might have perspectives more similar to those of the adjacent block group rather than each other. If this were the case, because the sampling frame for identifying safety contexts provided the bulk of the sample for the rating phase, the safety of the context and the rating of the interventions would have been biased in similar fashions. [207]

Lastly, this effort did not benefit from the knowledge and engagement of a full-time youth policy development specialist. When one was invited to sessions, the CAC had already developed and the value of an outside specialist was not sufficiently appreciated. Had such a person been part of the process, the group would have gained additional skills.

Conclusions and Implications for Future Research

Increasing physical activity among youth is part of a national comprehensive plan for reversing the obesity epidemic.[49] The factors influencing physical activity are complex and varied. Engaging grassroots communities to identify their priorities for improvements can help tailor evidence-based national strategies for the local context. This study challenges the typical problem-oriented research paradigm and research done without community participation. It similarly highlights the tension between academic hypothesis testing and using research as one piece of a social change project.[177] While

the study results could have focused exclusively on the differential need for interventions between safety contexts, community members preferred focusing on issues common to the communities, the needs expressed by children. If the results had been done using a traditional, top-down research paradigm, community presentations would have run the danger of stigmatizing neighborhoods by publicizing different safety contexts and their disparate needs.

Instead, grassroots participants guided each phase of the study, and suggested many interventions consistent with nationally-recommended, evidence-based interventions. Their insistence on focusing on the go-zone analyses showing that youth want interventions that are fun, free and safe, seems simple, but it is has a deep rationale. Community members from less safe neighborhoods in this study were acutely aware of the impact of safety context on their children's activity. They also worked especially in the less safe contexts to bring more opportunities to children there. To address the safety environment, however, the CAC didn't want to focus on safety interventions alone which could stigmatize communities. Instead, it recommended framing interventions as fun, free and safe so the intervention would be seen as positive and the stigmatizing safety issues could be more subtly addressed. This subtle, but important lesson in framing interventions to address disparities seems to hold lessons for the broader field of disparities research. While earlier generations of disparities research focused on the differences in health outcomes and needs, newer disparities research focuses on solutions, where paying attention to how solutions are framed takes on increasing importance.

This study highlights a number of interesting questions worthy of future research. Results presented here suggest that differences in perceived community needs are

associated with safety context differences, and that in less safe contexts people from different racial/ethnic groups have different perspectives. One interesting question is, "why do people from different ethnic backgrounds have different perceptions of need when they live in the same geographic context?" Especially, why would white people see less need for safety interventions compared to their black and Latino counterparts? How do systems, policies, and interpersonal and intrapersonal behaviors contribute to these differential perceptions? What perpetuates the perception of different levels of need? Is it a socio-economic disparity that affords differential access to physical activity opportunities inside and outside the geographic context, or might it also be another facet of disparate *doxa* in these contexts? Perhaps these questions could be explored through the lens of white privilege.

Also of interest would be research on how the strengths of grassroots and grass-tops participation can be maximized. Whereas grassroots could identify priorities they thought most needed, grass-tops could help make residents aware of available resources to meet their needs. The primary question here is whether a Northern or Southern CBPR process, or blend of the two, would be more effective in improving physical activity, and in challenging dominant *doxa* that may only perpetuate disparities. Given similar resources (including paid time to do this work), what leadership structure would produce changes in youth physical activity most efficiently?

REFERENCES

1. OPHS Press Office. http://www.hhs.gov/news/press/2010pres/01/20100128c.html; 2010.

2. Strauss RS, Pollack HA. Epidemic increase in childhood overweight, 1986-1998. *JAMA*. Dec 12 2001;286(22):2845-2848.

3. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. *JAMA,*. Apr 5 2006;295(13):1549-1555.

4. Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA,*. Oct 9 2002;288(14):1728-1732.

5. National Center for Health Statistics- Centers for Disease Control and Prevention. Prevalence of overweight among children and adolescents: United States 2003-2004. http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overweight/overwght_child_03.htm. Accessed 10/2/07.

6. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. *JAMA*. Feb 1 2012;307(5):483-490.

7. Ogden CL, Carroll ME, Kit BK, Flegal KM. Prevalence of obesity in the United States, 2009-2010. *NCHS Data Brief*. Jan 2012(82):1-8.

8. IOM (Institute of Medicine). *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*. Washington, DC: The National Academies Press; 2012.

9. Tudor-Locke C, Kronenfeld JJ, Kim SS, Benin M, Kuby M. A geographical comparison of prevalence of overweight school-aged children: the National Survey of Children's Health 2003. *Pediatrics*. Oct 2007;120(4):e1043-1050.

10. Bethell C, Simpson L, Stumbo S, Carle AC, Gombojav N. National, state, and local disparities in childhood obesity. *Health Aff (Millwood)*. Mar-Apr 2009;29(3):347-356.

11. Flegal KM, Ogden CL, Yanovski JA, et al. High adiposity and high body mass index-for-age in US children and adolescents overall and by race-ethnic group. *Am J Clin Nutr.* Apr 2010;91(4):1020-1026.

12. Rossen LM, Schoendorf KC. Measuring health disparities: trends in racial-ethnic and socioeconomic disparities in obesity among 2- to 18-year old youth in the United States, 2001-2010. *Ann Epidemiol.* Oct 2012;22(10):698-704.

13. Daniels SR. The consequences of childhood overweight and obesity. *Future Child.* Spring 2006;16(1):47-67.

14. Dietz WH. Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics.* Mar 1998;101(3 Pt 2):518-525.

15. Finkelstein EA, Fiebelkorn IC, Wang G. State-level estimates of annual medical expenditures attributable to obesity. *Obes Res.* Jan 2004;12(1):18-24.

16. Trasande L, Chatterjee S. The impact of obesity on health service utilization and costs in childhood. *Obesity (Silver Spring).* Sep 2009;17(9):1749-1754.

17. Must A, Tybor DJ. Physical activity and sedentary behavior: a review of longitudinal studies of weight and adiposity in youth. *Int J Obes (Lond).* Sep 2005;29 Suppl 2:S84-96.

18. Perez A, Hoelscher DM, Springer AE, et al. Physical activity, watching television, and the risk of obesity in students, Texas, 2004-2005. *Prev Chronic Dis.* May 2011;8(3):A61.

19. Mavrovouniotis F. Inactivity in Childhood and Adolescence: A Modern Lifestyle Associated with Adverse Health Consequences. *Sport Science Review.* 2012;XXI(3):75-99.

20. Andersen LB, Riddoch C, Kriemler S, Hills AP. Physical activity and cardiovascular risk factors in children. *Br J Sports Med.* Sep 2011;45(11):871-876.

21. Sallis JF, Prochaska JJ, Taylor WC. A review of correlates of physical activity of children and adolescents. *Med Sci Sports Exerc.* May 2000;32(5):963-975.

22. Centers for Disease Control and Prevention. Youth risk behavior surveillance - United States, 2005. Surveillance Summaries. *MMWR* 2006;55(SS-5):1-108.

23. U.S. Department of Health and Human Services. Healthy People 2020 Summary of Objectives, Physical Activity. http://www.healthypeople.gov/2020/topicsobjectives2020/pdfs/PhysicalActivity.pdf. Accessed April 28, 2013.

24. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance - United States, 2009. *MMWR Surveill Summ.* Jun 4 2010;59(5):1-142.

25. Troiano RP, Berrigan D, Dodd KW, Masse LC, Tilert T, McDowell M. Physical activity in the United States measured by accelerometer. *Med Sci Sports Exerc.* Jan 2008;40(1):181-188.

26. Gortmaker SL, Lee R, Cradock AL, Sobol AM, Duncan DT, Wang YC. Disparities in youth physical activity in the United States: 2003-2006. *Med Sci Sports Exerc.* May 2012;44(5):888-893.

27. Whitt-Glover MC, Taylor WC, Floyd MF, Yore MM, Yancey AK, Matthews CE. Disparities in physical activity and sedentary behaviors among US children and adolescents: prevalence, correlates, and intervention implications. *J Public Health Policy.* 2009;30 Suppl 1:S309-334.

28. Belcher BR, Berrigan D, Dodd KW, Emken BA, Chou CP, Spruijt-Metz D. Physical activity in US youth: effect of race/ethnicity, age, gender, and weight status. *Med Sci Sports Exerc.* Dec 2010;42(12):2211-2221.

29. Centers for Disease Control and Prevention (CDC). Trends in the Prevalence of Physical Activity, National YRBS: 1991—2009. http://www.cdc.gov/healthyyouth/yrbs/pdf/us_physical_trend_yrbs.pdf. Accessed 6/1/12.

30. Pucher J, Buehler R, Merom D, Bauman A. Walking and cycling in the United States, 2001-2009: evidence from the National Household Travel Surveys. *Am J Public Health.* Dec 2011;101 Suppl 1:S310-317.

31. Kaiser Family Foundation. *GENERATION M2: Media in the lives of 8- to 18-year-olds.* Menlo Park, CA 2010.

32. U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon Genera.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National

Center for Chronic Disease Prevention and Health Promotion,; 1996.

33. Lowry R, Lee SM, Fulton JE, Kann L. Healthy people 2010 objectives for physical activity, physical education, and television viewing among adolescents: national trends from the Youth Risk Behavior Surveillance System, 1999-2007. *J Phys Act Health.* 2009;6 Suppl 1:S36-45.

34. Sallis JF, Owens N. Ecological models of health behavior. In: Glanz K, Rimer B, Lewis F, eds. *Health behavior and health education: Theory, Research, & Practice (2nd edition)*. San Francisco, CA: Jossey-Bass; 2002:462-484.

35. Ding D, Sallis JF, Kerr J, Lee S, Rosenberg DE. Neighborhood environment and physical activity among youth a review. *Am J Prev Med.* Oct 2011;41(4):442-455.

36. Yen IH, Kaplan GA. Poverty area residence and changes in physical activity level: evidence from the Alameda County Study. *Am J Public Health.* Nov 1998;88(11):1709-1712.

37. Leslie E, Owen N, Salmon J, Bauman A, Sallis JF, Lo SK. Insufficiently active Australian college students: perceived personal, social, and environmental influences. *Prev Med.* Jan 1999;28(1):20-27.

38. Jain A, Sherman SN, Chamberlin LA, Carter Y, Powers SW, Whitaker RC. Why don't low-income mothers worry about their preschoolers being overweight? *Pediatrics.* May 2001;107(5):1138-1146.

39. Rhee KE, De Lago CW, Arscott-Mills T, Mehta SD, Davis RK. Factors associated with parental readiness to make changes for overweight children. *Pediatrics.* Jul 2005;116(1):e94-101.

40. Humbert ML, Chad KE, Spink KS, et al. Factors that influence physical activity participation among high- and low-SES youth. *Qual Health Res.* Apr 2006;16(4):467-483.

41. McKenzie TL, Sallis JF, Nader PR, Broyles SL, Nelson JA. Anglo- and Mexican-American preschoolers at home and at recess: activity patterns and environmental influences. *J Dev Behav Pediatr.* Jun 1992;13(3):173-180.

42. Veugelers PJ, Fitzgerald AL. Prevalence of and risk factors for childhood overweight and obesity. *CMAJ.* Sep 13 2005;173(6):607-613.

43. Frenn M, Malin S, Bansal N, et al. Addressing health disparities in middle school students' nutrition and exercise. *J Community Health Nurs.* Spring 2003;20(1):1-14.

44. Davis SM, Clay T, Smyth M, et al. Pathways curriculum and family interventions to promote healthful eating and physical activity in American Indian schoolchildren. *Prev Med.* Dec 2003;37(6 Pt 2):S24-34.

45. Hawkins SS, Law C. A review of risk factors for overweight in preschool children: a policy perspective. *Int J Pediatr Obes.* 2006;1(4):195-209.

46. Institutes of Medicine (U.S.) Committee on Prevention of Obesity in Children and Youth. *Preventing Childhood Obesity: Health in the Balance*. Washington, D.C.: National Academy of Sciences; 2005.

47. Kumanyika S, Grier S. Targeting interventions for ethnic minority and low-income populations. *Future Child.* Spring 2006;16(1):187-207.

48. Trust for America's Health, The Robert Wood Johnson Foundation. F as in fat: How obesity policies are failing in America. http://healthyamericans.org/reports/obesity2008/; http://healthyamericans.org/reports/obesity2008/Obesity2008Report.pdf. Accessed September 10, 2012.

49. Khan LK, Sobush K, Keener D, et al. Recommended community strategies and measurements to prevent obesity in the United States. *MMWR Recomm Rep.* Jul 24 2009;58(RR-7):1-26.

50. Brownson RC, Haire-Joshu D, Luke DA. Shaping the context of health: a review of environmental policy approaches in the prevention of chronic disease. *Annual Review of Public Health.* 2006;27:241-370.

51. Booth KM, Pinkston MM, Poston WS. Obesity and the built environment. *J Am Diet Assoc.* May 2005;105(5 Suppl 1):S110-117.

52. Zhu X, Lee C. Walkability and safety around elementary schools economic and ethnic disparities. *Am J Prev Med.* Apr 2008;34(4):282-290.

53. Flores GR. Active living in Latino communities. *Am J Prev Med.* Apr 2008;34(4):369-370.

54. Robinson RG. Community development model for public health applications: overview of a model to eliminate population disparities. *Health Promot Pract.* Jul 2005;6(3):338-346.

55. Sallis JF, al. e. An ecological approach to creating active living communities. *Annual Review of Public Health.* 2006;27:297-322.

56. Stokols D. Translating social ecological theory into guidelines for community health promotion. *Am J Health Promo.* 1996;10(4):282-298.

57. Diez-Roux AV, Nieto FJ, Muntaner C, et al. Neighborhood environments and coronary heart disease: a multilevel analysis. *Am J Epidemiol.* Jul 1 1997;146(1):48-63.

58. Diez-Roux AV, Nieto FJ, Caulfield L, Tyroler HA, Watson RL, Szklo M. Neighbourhood differences in diet: the Atherosclerosis Risk in Communities (ARIC) Study. *J Epidemiol Community Health.* Jan 1999;53(1):55-63.

59. Yen IH, Kaplan GA. Neighborhood social environment and risk of death: multilevel evidence from the Alameda County Study. *Am J Epidemiol.* May 15 1999;149(10):898-907.

60. Yen IH, Kaplan GA. Poverty area residence and changes in depression and perceived health status: evidence from the Alameda County Study. *Int J Epidemiol.* Feb 1999;28(1):90-94.

61. Robert SA. Community-level socioeconomic status effects on adult health. *J Health Soc Behav.* Mar 1998;39(1):18-37.

62. Pate RR, Pratt M, Blair SN, et al. Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *JAMA.* Feb 1 1995;273(5):402-407.

63. US Department of Health and Human Services. *The Surgeon General's call to action to prevent and decrease overweight and obesity*. Rockville, MD: US Department of Health and Human Services, Public Health Services, Office of the Surgeon General; 2001.

64. Hong T, Farley TA. Urban residents' priorities for neighborhood features. A survey of New Orleans residents after Hurricane Katrina. *Am J Prev Med.* Apr 2008;34(4):353-356.

65. Sallis JF, McKenzie TL, Elder JP, Broyles SL, Nader PR. Factors parents use in selecting play spaces for young children. *Arch Pediatr Adolesc Med.* Apr 1997;151(4):414-417.

66. Kerr J, Rosenberg D, Sallis JF, Saelens BE, Frank LD, Conway TL. Active commuting to school: Associations with environment and parental concerns. *Med Sci Sports Exerc.* Apr 2006;38(4):787-794.

67. Timperio A, Salmon J, Telford A, Crawford D. Perceptions of local neighbourhood environments and their relationship to childhood overweight and obesity. *Int J Obes (Lond).* Feb 2005;29(2):170-175.

68. Saelens BE. Helping individuals reduce sedentary behavior. In: Andersen RE, ed. *Obesity: Etiology, assessment, treatment and prevention*. Champaign, Ill: Human Kinetics; 2003:217-238.

69. Timperio A, Crawford D, Telford A, Salmon J. Perceptions about the local neighborhood and walking and cycling among children. *Prev Med.* Jan 2004;38(1):39-47.

70. Miles R. Neighborhood disorder, perceived safety, and readiness to encourage use of local playgrounds. *Am J Prev Med.* Apr 2008;34(4):275-281.

71. Farley TA, Meriwether RA, Baker ET, Watkins LT, Johnson CC, Webber LS. Safe play spaces to promote physical activity in inner-city children: results from a pilot study of an environmental intervention. *Am J Public Health.* Sep 2007;97(9):1625-1631.

72. Giles-Corti B, Broomhall MH, Knuiman M, et al. Increasing walking: how important is distance to, attractiveness, and size of public open space? *Am J Prev Med.* Feb 2005;28(2 Suppl 2):169-176.

73. American Association of Physical Anthropologists. *American Journal of Physical Anthropology*1996;101:569-570.

74. American Anthropological Association. American Anthropological Association Statement on "Race". http://www.aaanet.org/stmts/racepp.htm.

75. Loewen LJ, Steele GD, Suedfeld P. Perceived safety from crime in the urban environment. *Journal of Environmental Psychology.* 1993;13:323-331.

76. Wilson DK, Kirtland KA, Ainsworth BE, Addy CL. Socioeconomic status and perceptions of access and safety for physical activity. *Ann Behav Med.* Aug 2004;28(1):20-28.

77. Boslaugh SE, Luke DA, Brownson RC, Naleid KS, Kreuter MW. Perceptions of neighborhood environment for physical activity: is it "who you are" or "where you live"? *J Urban Health.* Dec 2004;81(4):671-681.

78. Anonymous. Neighborhood safety and the prevalence of physical inactivity--selected states, 1996. *MMWR Morb Mortal Wkly Rep.* Feb 26 1999;48(7):143-146.

79. Foster S, Giles-Corti B. The built environment, neighborhood crime and constrained physical activity: an exploration of inconsistent findings. *Preventive Medicine.* 2008;47:241-251.

80. Taylor RB, Hale M. Testing alternative models of fear of crime. *The Journal of Criminal Law and Criminology.* 1986;77(1):151-189.

81. Romero AJ, Robinson TN, Kraemer HC, et al. Are perceived neighborhood hazards a barrier to physical activity in children? *Arch Pediatr Adolesc Med.* Oct 2001;155(10):1143-1148.

82. McDonald NC. Critical factors for active transportation to school among low-income and minority students. Evidence from the 2001 National Household Travel Survey. *Am J Prev Med.* Apr 2008;34(4):341-344.

83. Mulvaney-Day NE, Alegria M, Sribney W. Social cohesion, social support, and health among Latinos in the United States. *Soc Sci Med.* Jan 2007;64(2):477-495.

84. Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science.* Aug 15 1997;277(5328):918-924.

85. Cohen DA, Finch BK, Bower A, Sastry N. Collective efficacy and obesity: the potential influence of social factors on health. *Soc Sci Med.* Feb 2006;62(3):769-778.

86. Fish JS, Ettner S, Ang A, Brown AF. Association of perceived neighborhood safety on body mass index. *AJPH.* 2010;100(11):2296-2302.

87. Carver A, Salmon J, Campbell K, Baur L, Garnett S, Crawford D. How do perceptions of local neighborhood relate to adolescents' walking and cycling? *Am J Health Promot.* Nov-Dec 2005;20(2):139-147.

88. Gomez JE, Johnson BA, Selva M, Sallis JF. Violent crime and outdoor physical activity among inner-city youth. *Prev Med.* Nov 2004;39(5):876-881.

89. Gordon-Larsen P, McMurray RG, Popkin BM. Determinants of adolescent physical activity and inactivity patterns. *Pediatrics.* Jun 2000;105(6):E83.

90. Sallis JF, Kraft K, Linton LS. How the environment shapes physical activity: a transdisciplinary research agenda. *Am J Prev Med.* Apr 2002;22(3):208.

91. Addy CL, Wilson DK, Kirtland KA, Ainsworth BE, Sharpe P, Kimsey D. Associations of perceived social and physical environmental supports with physical activity and walking behavior. *Am J Public Health.* Mar 2004;94(3):440-443.

92. Burdette HL, Wadden TA, Whitaker RC. Neighborhood safety, collective efficacy, and obesity in women with young children. *Obesity (Silver Spring).* Mar 2006;14(3):518-525.

93. Burdette HL, Whitaker RC. A national study of neighborhood safety, outdoor play, television viewing, and obesity in preschool children. *Pediatrics.* Sep 2005;116(3):657-662.

94. Sallis JF, Alcaraz JE, McKenzie TL, Hovell MF. Predictors of change in children's physical activity over 20 months. Variations by gender and level of adiposity. *Am J Prev Med.* Apr 1999;16(3):222-229.

95. Davison KK, Lawson CT. Do attributes in the physical environment influence children's physical activity? A review of the literature. *Int J Behav Nutr Phys Act.* 2006;3:19.

96. Roman CG, Chalfin A. Fear of walking outdoors. A multilevel ecologic analysis of crime and disorder. *Am J Prev Med.* Apr 2008;34(4):306-312.

97. Sampson RJ. Neighborhood and Community: Collective Efficacy and Community Safety. *New Economy.* 2004;11:106-113.

98. Kelly CM, Baker EA, Brownson RC, Schootman M. Translating research into practice: using concept mapping to determine locally relevant intervention

strategies to increase physical activity. *Eval Program Plann.* Aug 2007;30(3):282-293.

99. Main DS, Ware G, Iwasaki PG, et al. Taking Neighborhood Health to Heart (TNH2H): building a community-based participatory data system. *Prev Chronic Dis.* Jan 2012;9:E41.

100. Boehmer TK, Luke DA, Haire-Joshu DL, Bates HS, Brownson RC. Preventing childhood obesity through state policy. Predictors of bill enactment. *Am J Prev Med.* Apr 2008;34(4):333-340.

101. Sallis JF, Cervero RB, Ascher W, Henderson KA, Kraft MK, Kerr J. An ecological approach to creating active living communities. *Annu Rev Public Health.* 2006;27:297-322.

102. Elder JP, Lytle L, Sallis JF, et al. A description of the social-ecological framework used in the trial of activity for adolescent girls (TAAG). *Health Educ Res.* Apr 2007;22(2):155-165.

103. Giles-Corti B, Donovan RJ. The relative influence of individual, social and physical environment determinants of physical activity. *Soc Sci Med.* Jun 2002;54(12):1793-1812.

104. Booth SL, Sallis JF, Ritenbaugh C, et al. Environmental and societal factors affect food choice and physical activity: rationale, influences, and leverage points. *Nutr Rev.* Mar 2001;59(3 Pt 2):S21-39; discussion S57-65.

105. Saelens BE, Sallis JF, Frank LD. Environmental correlates of walking and cycling: findings from the transportation, urban design, and planning literatures. *Ann Behav Med.* Spring 2003;25(2):80-91.

106. Sallis JF, Glanz K. The role of built environments in physical activity, eating, and obesity in childhood. *Future Child.* Spring 2006;16(1):89-108.

107. Suminski RR, Ding D, Lee R, May L, Tota T, Dinius D. Youth physical activity opportunities in lower and higher income neighborhoods. *J Urban Health.* Aug 2011;88(4):599-615.

108. Powell LM, Slater S, Chaloupka FJ. The relationship between community physical activity settings and race, ethnicity and socioeconomic status. *Evidence-based Preventive Medicine.* 2004;1:135-144.

109. Powell LM, Slater S, Chaloupka FJ, Harper D. Availability of physical activity-related facilities and neighborhood demographic and socioeconomic characteristics: a national study. *Am J Public Health.* Sep 2006;96(9):1676-1680.

110. Estabrooks PA, Lee RE, Gyurcsik NC. Resources for physical activity participation: does availability and accessibility differ by neighborhood socioeconomic status? *Ann Behav Med.* Spring 2003;25(2):100-104.

111. Gordon-Larsen P, Nelson MC, Page P, Popkin BM. Inequality in the built environment underlies key health disparities in physical activity and obesity. *Pediatrics.* Feb 2006;117(2):417-424.

112. Wang G, Macera CA, Scudder-Soucie B, Schmid T, Pratt M, Buchner D. Cost effectiveness of a bicycle/pedestrian trail development in health promotion. *Prev Med.* Feb 2004;38(2):237-242.

113. Wang G, Macera CA, Scudder-Soucie B, et al. Cost analysis of the built environment: the case of bike and pedestrian trials in Lincoln, Neb. *Am J Public Health.* Apr 2004;94(4):549-553.

114. Brownson RC, Housemann RA, Brown DR, et al. Promoting physical activity in rural communities: walking trail access, use, and effects. *Am J Prev Med.* Apr 2000;18(3):235-241.

115. Gostin LO, Boufford JI, Martinez RM. The future of the public's health: vision, values, and strategies. *Health Aff (Millwood).* Jul-Aug 2004;23(4):96-107.

116. McNeill LH, Kreuter MW, Subramanian SV. Social environment and physical activity: a review of concepts and evidence. *Soc Sci Med.* Aug 2006;63(4):1011-1022.

117. Li F, Fisher KJ, Brownson RC, Bosworth M. Multilevel modeling of built environment characteristics related to neighbourhood walking activity in older adults. *J Epidemiol Community Health.* Jul 2005;59(7):558-564.

118. Community-Campus Partnerships for Health WKFCHSP. WK Kellogg Foundation Community Health Scholars Program. 2005.

119. Israel B, Schulz AJ, Parker E, Becker A. Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health.* 1998;19:173-202.

120. Marcus BH, Williams DM, Dubbert PM, et al. Physical activity intervention studies: what we know and what we need to know: a scientific statement from the American Heart Association Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity); Council on Cardiovascular Disease in the Young; and the Interdisciplinary Working Group on Quality of Care and Outcomes Research. *Circulation.* Dec 12 2006;114(24):2739-2752.

121. Kumanyika SK, Obarzanek E, Stettler N, et al. Population-based prevention of obesity: the need for comprehensive promotion of healthful eating, physical activity, and energy balance: a scientific statement from American Heart Association Council on Epidemiology and Prevention, Interdisciplinary Committee for Prevention (formerly the expert panel on population and prevention science). *Circulation.* Jul 22 2008;118(4):428-464.

122. Crespo CJ, Smit E, Andersen RE, Carter-Pokras O, Ainsworth BE. Race/ethnicity, social class and their relation to physical inactivity during leisure time: results from the Third National Health and Nutrition Examination Survey, 1988-1994. *Am J Prev Med.* Jan 2000;18(1):46-53.

123. Weir LA, Etelson D, Brand DA. Parents' perceptions of neighborhood safety and children's physical activity. *Prev Med.* Sep 2006;43(3):212-217.

124. Cohen DA, Inagami S, Finch B. The built environment and collective efficacy. *Health Place.* Jun 16 2007.

125. Krieger N. Experiences of discrimination. 2005.

126. Kumanyika S. Ethnic minorities and weight control research priorities: Where are we now and where do we need to be? *Prev Med.* Dec 2008;47(6):583-586.

127. Townsend P, Davidson N. The Black Report. In: Townsend P, Davidson N, Whitehead M, eds. *Inequalities in health: the Black Report and the health divide*. London: Penguin; 1988.

128. Frohlich KL, Corin E, Potvin L. A theoretical proposal for the relationship between context and disease. *Sociology of Health & Illness.* 2001;23(6):776-797.

129. Schulz AJ, Mullings L. *Gender, race, class & health*: Jossey-Bass; 2006.

130. Kumanyika SK. Environmental influences on childhood obesity: ethnic and cultural influences in context. *Physiol Behav.* Apr 22 2008;94(1):61-70.

131. Gerberding JL. Childhood obesity and the impact of food marketing on children before the

Senate Committee on Appropriations Subcommittee on Health, Education, Labor and Pensions. http://www.hhs.gov/asl/testify/2008/09/t20080923c.html.

132. Lovejoy M. Disturbances in the Social Body: Differences in Body Image and Eating Problems among African American and White Women. *Gender and Society.* 2001;15(2):239-261.

133. Beauboeuf-Lafontant T. Strong and Large Black Women? Exploring Relationships between Deviant Womanhood and Weight. *Gender and Society.* 2003;17(1):111-121.

134. Kumanyika S, Wilson JF, Guilford-Davenport M. Weight-related attitudes and behaviors of black women. *J Am Diet Assoc.* Apr 1993;93(4):416-422.

135. LaVeist TA. *Minority populations and health. An introduction to health disparities in the United States*. San Francisco: Jossey-Bass; 2005.

136. Shi L, Stevens GD. *Vulnerable populations in the United States*. San Francisco: John Wiley & Sons; 2005.

137. Morland K, Wing S, Diez Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. In: LaVeist T, ed. *Minority populations and health. An introduction to health disparities in the United States*. San Francisco: Jossey-Bass; 2005:448-462.

138. Williams DM, Anderson ES, Winett RA. A review of the outcome expectancy construct in physical activity research. *Ann Behav Med.* Feb 2005;29(1):70-79.

139. Krieger N. Epidemiology and the web of causation: has anyone seen the spider? *Soc Sci Med.* Oct 1994;39(7):887-903.

140. Dressler WW, Borges CD, Balieiro MC, Dos Santos JE. Measuring cultural consonance: examples with special reference to measurement theory in anthropology. *Field Methods.* 2005;17:331-355.

141. Dressler WW, Balieiro MC, Dos Santos JE. The cultural construction of social support in Brazil: associations with health outcomes. *Cult Med Psychiatry.* Sep 1997;21(3):303-335.

142. Thomson P. Field. In: Grenfell M, ed. *Pierre Bourdieu key concepts*. Stocksfield: Acumen Publishing Limited; 2008:67-81.

143. Bourdieu P. *Practical reason: On theory of action*. Stanford, CA: Stanford University Press; 1998.

144. Deer C. Doxa. In: Grenfell M, ed. *Pierre Bourdieu key concepts*. Stocksfield: Acumen Publishing Limited; 2008:119-130.

145. Bourdieu P. Sport and social class. . *Social Science Information.* 1978;17(6):819-840.

146. Steinbach R, Green J, Datta J, Edwards P. Cycling and the city: a case study of how gendered, ethnic and class identities can shape healthy transport choices. *Soc Sci Med.* Apr 2011;72(7):1123-1130.

147. Bourgois P. *In Search of Respect. Selling Crack in El Barrio*. New York: Cambridge University Press; 1995.

148. Merry SE. *Urban danger: life in a neighborhood of strangers*. Philadelphia: Temple University Press; 1981.

149. Bourdieu P. Les trois etats du capital culturel. *Actes Rech. Sci. Soc.* 1979;30:3-6.

150. Portes A. Social Capital: Its Origins and Applications in Modern Sociology *Annual Review of Sociology.* 1998;24:1-24.

151. Wallerstein N, Duran B. The theoretical, historical and practice roots of CBPR. In: Minkler M, Wallerstein N, eds. *Community-based participatory research for health: From process to outcomes*. 2nd ed. San Francisco, CA: John Wiley & Sons; 2008:25-46.

152. Minkler M. Linking science and policy through community-based participatory research to study and address health disparities. *Am J Public Health.* Apr 1 2010;100 Suppl 1:S81-87.

153. Wallerstein N. Empowerment and health: the theory and practice of community change. *Community Development Journal.* 1993;28(3):218-227.

154. Perkins D, Zimmerman M. Empowerment theory, research and application. *Am J Community Psychol.* 1995;23(6):569-579.

155. Freire P. *pedagogy of the oppressed*. New York: Continuum; 1970.

156. Minkler M, Wallerstein NB. Improving health through community organization and community building. In: Glanz K, Rimer BK, Lewis F, eds. *Health behavior and health education: Theory, research and practice* San Francisco: Jossey-Bass; 2002:279-311.

157. Habermas J. *The theory of communicative action. Vol. II: Lifeworld and system*. Boston: Beacon; 1987.

158. Ritzer G. Agency-structure integration. *Contemporary Sociological Theory*. 3rd ed. New York: McGraw Hill; 1992:427-456.

159. Wallerstein N, Duran B. The conceptual, historical, and practice roots of community based participatory research and related participatory traditions. In: Minkler M, Wallerstein N, eds. *Community-based participatory research for health*. San Francisco: Jossey-Bass; 2003.

160. Freire P. *Pedagogy of the oppressed*. New York: The Continuum Publishing Company; 1993.

161. Encyclopedia Britannica. http://www.britannica.com/EBchecked/topic/455564/Phenomenology. Accessed December, 13, 2008.

162. Block P. *Community: the structure of belonging*. San Francisco, CA: Berrett-Koehler Publishers, Inc.; 2008.

163. Gauvin L, Richard L, Craig CL, et al. From walkability to active living potential: an "ecometric" validation study. *Am J Prev Med.* Feb 2005;28(2 Suppl 2):126-133.

164. Krieger N, Zierler S, Hogan JW, et al. Geocoding and measurement of neighborhood socioeconomic position: A U.S. perspective. In: Kawachi I, Berkman LF, eds. *Neighborhoods and Health*. New York, NY: Oxford University Press; 2003:147-178.

165. Hillemeier MM, Lynch J, Harper S, Casper M. Measuring contextual characteristics for community health. *Health Serv Res.* Dec 2003;38(6 Pt 2):1645-1717.

166. Pikora TJ, Bull FC, Jamrozik K, Knuiman M, Giles-Corti B, Donovan RJ. Developing a reliable audit instrument to measure the physical environment for physical activity. *Am J Prev Med.* Oct 2002;23(3):187-194.

167. Saelens BE, Sallis JF, Black JB, Chen D. Neighborhood-based differences in physical activity: an environment scale evaluation. *Am J Public Health.* Sep 2003;93(9):1552-1558.

168. Caughy MO, O'Campo PJ, Patterson J. A brief observational measure for urban neighborhoods. *Health Place.* Sep 2001;7(3):225-236.

169. Laraia BA, Messer L, Kaufman JS, et al. Direct observation of neighborhood attributes in an urban area of the US south: characterizing the social context of pregnancy. *Int J Health Geogr.* 2006;5:11.

170. Hill JL. *Examining the potential relationships between social capital, built environment and physical activity: A mixed methods study*. Denver: School of Health and Behavioral Sciences, University of Colorado; 2009.

171. Everitt BS. *Cluster analysis*. New York: John Wiley & Sons; 1994.

172. RK B. Mixture model tests of cluster analysis: accuracy of four hierarchical agglomerative methods. *Psychological Bulletin.* 1976;83:377-385.

173. Gorman I. *Childhood obesity: parents vs. environment, who has the greater influence?* Denver: Health and Behavioral Sciences, University of Colorado; 2012.

174. Kane M, Trochim WMK. *Concept Mapping for Planning and Evaluation*. Thousand Oaks, CA: Sage Publication; 2007.

175. JaMuir MR, Trochim WMK. An examination of community members', researchers' and health professionals' perceptions of barriers to minority participation in medical research: an application of concept mapping. *Ethnicity and Health.* 2007;12(5):521-539.

176. Israel BA, Schulz AJ, Parker EA, Becker AB, Allen AJ. Critical issues in developing and following community based participatory research principles. In: Minkler M, Wallerstein N, eds. *Community-based participatory research for health*. San Francisco: Jossey-Bass; 2003.

177. Stoeker R. Are academics irrelevant? Approaches and roles for scholars in community based participatory research. In: Minkler M, Wallerstein N, eds. *Community-based participatory research for health*. San Francisco: Jossey- Bass; 2003.

178. Timperio A, Ball K, Salmon J, et al. Personal, family, social, and environmental correlates of active commuting to school. *Am J Prev Med.* Jan 2006;30(1):45-51.

179. Bacha JM, Appugliese D, Coleman S, et al. Maternal perception of neighborhood safety as a predictor of child weight status: The moderating effect of gender and assessment of potential mediators. *Int J Pediatr Obes.* 2010;5(1):72-79.

180. Rossen LM, Pollack KM, Curriero FC, et al. Neighborhood incivilities, perceived neighborhood safety, and walking to school among urban-dwelling children. *J Phys Act Health.* Feb 2011;8(2):262-271.

181. Blalock HM. *Toward a Theory of Minority-Group Relations,*. New York: John Wiley & Sons; 1967.

182. Covington J, Taylor RB. Fear of crime in urban residential neighborhoods: implications of between- and within-neighborhood sources for current models. *Sociological Quarterly.* 1991;32(2):231-249.

183. Weitzer R, Kubrin CE. Breaking news: How local TV news and real-world conditions affect fear of crime. *Justice Quarterly.* 2004;21(3):497-520.

184. Miles R, Panton L. The influence of the perceived quality of community environments on low-income women's efforts to walk more. *J Community Health.* Oct 2006;31(5):379-392.

185. Cecil-Karb R, Grogan-Kaylor A. Childhood body mass index in community context: neighborhood safety, television viewing, and growth trajectories of BMI. *Health Soc Work.* Aug 2009;34(3):169-177.

186. Lindsay AC, Sussner KM, Greaney ML, Peterson KE. Influence of social context on eating, physical activity, and sedentary behaviors of Latina mothers and their preschool-age children. *Health Educ Behav.* Feb 2009;36(1):81-96.

187. Olvera N, Smith DW, Lee C, et al. Hispanic maternal and children's perceptions of neighborhood safety related to walking and cycling. *Health Place.* Jan 2012;18(1):71-75.

188. Loukaitour-Sideris A, Eck JE. Crime prevention and active living. *Am J Health Promo.* 2007;21(4 [Supplement]):380-389.

189. Thomas SB, Quinn SC, Butler J, Fryer CS, Garza MA. Toward a fourth generation of disparities research to achieve health equity. *Annu Rev Public Health.* 2011;32:399-416.

190. Robinson TN, Sirard JR. Preventing childhood obesity: a solution-oriented research paradigm. *Am J Prev Med.* Feb 2005;28(2 Suppl 2):194-201.

191. Green LW, Mercer SL. Can public health researchers and agencies reconcile the push from funding bodies and pull from communities? *Am J Public Health.* 2001;91(12):1926-1929.

192. Kessel SS, McCarron DA. Future directions: a community-based approach. *Pediatrics.* Nov 2010;126 Suppl 2:S98-100.

193. McCarron DA, Richartz N, Brigham S, White MK, Klein SP, Kessel SS. Community-based priorities for improving nutrition and physical activity in childhood. *Pediatrics.* Nov 2010;126 Suppl 2:S73-89.

194. McCarron DA, Kessel SS. Shaping America's Youth initiative: implementation and assessment of a community-based approach to improving childhood nutrition and physical activity. Introduction. *Pediatrics.* Nov 2010;126 Suppl 2:S71-72.

195. Vander Stoep A, Williams MV, Jones R, Green L, Trupin E. Families as full research partners: what's in it for us? *the Journal of Behavioral Health Services & Research.* 1999;26(3):329-344.

196. Travers KD. Reducing inequities through participatory research and community empowerment. *Health Educ Behav.* 1997;24(3):344-356.

197. McKenna SA, Iwasaki PG, Stewart T, Main DS. Key informants and community members in community-based participatory research: one is not like the other. *Prog Community Health Partnersh.* Winter 2011;5(4):387-397.

198. Kopell MR. Civic engagement: bringing in the real experts--a commentary on the Shaping America's Youth initiative. *Pediatrics.* Nov 2010;126 Suppl 2:S90-94.

199. Katz DL, Nawaz H, Jennings G, et al. Community health promotion and the randomized controlled trial: approaches to finding common ground. *J Public Health Management Practice.* 2001;7(2):33-40.

200. Ohri-Vackaspati P, Leviton L, Bors P, Brennan L, Brownson RC, Strunk S. Strategies proposed by Healthy Kids, Healthy Communities partnerships to prevent childhood obesity. *Prev Chronic Dis.* 2012;9:http://www.cdc.gov/pcd/issues/2012/2010_0292.htm.

201. The Joint Center for Political and Economic Studies, Prevention Institute. Reducing Inequities in Health and Safety through Prevention http://www.preventioninstitute.org/component/jlibrary/article/id-201/127.html. Accessed April 28, 2013.

202. Robert Wood Johnson Foundation, Commission to Build a Healthier America. Beyond Health Care: New Directions for a Healthier America. April; http://www.commissiononhealth.org/PDF/779d4330-8328-4a21-b7a3-deb751dafaab/Beyond%20Health%20Care%20-%20New%20Directions%20to%20a%20Healthier%20America.pdf Accessed April 29, 2013.

203. Williams DR, Collins C. Racial residential segregation. In: LaVeist TA, ed. *Race, ethnicity and health*. San Francisco, CA: Jossey-Bass; 2002:369-390.

204. Cohen L, Iton A, Davis R, Rodriguez S. *A time of opportunity: Local solutions to reduce inequities in health and safety.* Minneapolis, MN: The Prevention Institute; May 2009.

205. Dankwa-Mullan I, Rhee KB, Williams K, et al. The science of eliminating health disparities: summary and analysis of the NIH summit recommendations. *Am J Public Health.* Apr 1 2010;100 Suppl 1:S12-18.

206. Franzini L, Elliott MN, Cuccaro P, et al. Influences of physical and social neighborhood environments on children's physical activity and obesity. *Am J Public Health.* Feb 2009;99(2):271-278.

207. Handwerker WP. *Quick Ethnography*. Walnut Creek, CA: AltaMira; 2001.

APPENDICES

Appendix 1: Participant Recruitment Flyer

Society of the Youth

We are the "Society of the Youth" and you are invited! Join us and help the youth in our neighborhoods be able to play more!

So join us in helping the youth!

Where: Come on down to the Local Library

What: Sit down with a small group and share your ideas about how we can make the neighborhood better for youth

When: Saturday, June XX, 2009, 10 am

And one of the best parts is that you get a gift certificate for helping out

This is part of a research project run by University of Colorado Denver

Questions? Call Stephanie at 303-724-1080 to learn more

Stephanie Phibbs COMIRB #**08-1388**

Appendix 2: CAC Facilitation Training Materials

Facilitation

What a good facilitator does-

- Connection.
- Leadership.
- Motivation.
- Explains things thoroughly.
- Gets people to participate.
- Call and give group members a reminder of the next coming up meeting.
- Makes sure that the community's voices are heard.
- Keeps other/off-topic ideas in a "parking lot.
- Lets people know about agendas/provide minutes.

Facilitación

- Conexión
- Liderazgo
- Motivación
- Explicar las cosas minuciosamente
- Hacer que la gente participe
- Llame a sus miembros del grupo para recordarles sobre la próxima reunión.
- Asegurar que las voces de la comunidad sean escuchadas.
- Mantener las ideas que no están relacionadas con el tema fuera de la reunión.
- Informar a los demás sobre las agenda/proporcionar las minutas.

Ideas brainstormed by The Society of the Youth working group, June 27, 2009

YOUR ROLE AS A FACILITATOR
(From Taking Neighborhood Health to Heart)

Your Role as a Facilitator

Roles and Responsibilities:
Your role is to help the participants discuss their shared and individual experiences related to the meeting goals. This can be done in many ways: by moving the discussion along; validating knowledge of participants when possible; asking follow-up questions to clarify participants' responses; stating the main points of what you have heard; checking with participants to verify that what you heard as main points is accurate ; connecting the discussion with meeting objectives; encouraging participation from everyone in group; using active listening skills at all times; helping participants stay on task; and acting as the timekeeper.

Your role is to draw out information or experiences from the participants and move toward accomplishing the meeting objectives. It is okay to share information or examples to move the group forward – be brief. If you find that you are talking a great deal more than the meeting participants, you may be sharing a great deal more of your perspectives and opinions instead of creating an opportunity for participants to be heard.

Your role is not to be a participant or to make decisions for the group. Do not make promises.

Be prepared!

Different Points of View:
Chances are good that there will be a range of different points of view in the group. Group dynamics can be very powerful. Your role is to help with meaningful and fair dialogue and to provide a space in which participants feel safe sharing their individual perspectives. Remind participants that it is not the intent of the sessions to reach agreement but instead to ensure that we identify and capture the range of different points of view. I recommend group agreements be presented before dialogue is started. If not proposed, you as the facilitator may wish to check with participants about the appropriateness of having an "agree to disagree" agreement. The facilitator should also check with the group about what can and cannot or should not be shared outside of the meeting.

Principles:
For consistency it is recommended that each facilitator apply the following: know your limits, be respectful, stay focused; interact honestly, avoid conflict of interest situations, strive to be objective, and authentic to the process.

Guidelines:
Have folks sitting so they are able to see each other – circle or horseshoe setting is best.
When you are talking, scan the room – talk to everyone in the group not just to a few.
Be aware of your body language.
Be yourself.
Make folks feel comfortable.
Look at everyone.

Call on everyone at least once.
Stay on topic and use the HEART TO HEART DISCUSION GUIDE.
Watch the time.
Be prepared.
Be flexible.
Take care of yourself.
A great way to elicit participation is to ask open-ended questions.
Pay attention to body language but do not assume that you know what someone is thinking or feeling simply based on their body language or facial expression.
Be open to hearing perspectives that differ from your own.
When clarifying participants' responses, avoid challenging their opinions.

Tips:

- Remind folks that the recorder will be writing and this is done to make sure we get as much information as possible. This is a cue to the recorder to turn on the tape recorder.
- Keep track of time and the agenda topics. Adjust time without compromising the agenda.
- Talker - when someone is in the middle of taking a breath, it is a great time to interject by saying "Thank you for your input. Let's hear from others folks."
- Quiet person - Turn to someone who has not talked and ask "What do you think about what was said?" or "What would you add?"
- If the group participants begin to repeat themselves, interject by refocusing their attention on the objectives of the meeting. For example you can say "This is a very important topic and I would be happy to talk more about this after the meeting" or "You can call _____, if you would like."
- Closing the conversation – Ask for final comments and thank everyone for participating. Remind them how valuable their input is and what will be done with the information gathered during the meeting.

"Let go for it" Exercise
Materials needed:
Group One: Role-play Facilitator, Hostess/Host and Recorder cards and Group Two: Role-play Participant cards. Humor and FUN!!

Cards:
Each card will have a description of your role and how you should act your part out.

Instructions:
Break up into groups of six; have three participants pick-up card group one and the other pick up card two. Each person will have a role and a card.

- Everyone should assume you have already been introduced and given the data for your neighborhood.
- Facilitator will start the discussion with the question on the Facilitator card; everyone else will get into your assigned role as if you were at a household meeting.
- You will have 5 minutes to be in this role. You will be asked to stop by the timekeeper (you must stop!!!), the person acting as the Facilitator will have one minute to share

what the experience felt like - what they did well and what they could improve. The Hostess/Host role will give feedback in one sentence on what the Facilitator did well and one sentence about what could be improved.

- Each card is passed to your right and exercise is repeated until all six participants in your group have experienced each role.

Disclaimer: The content on facilitation is not meant to replace facilitation training. It is strongly recommended if you continue to facilitate that you receive training in the area of facilitation.

The document was adapted from C. Barrientos' Capacity Building and Technical Assistance Tools. Edited by George Ware.

Su Papel como Facilitador
(From Taking Neighborhood Health to Heart Materials)

Papel y responsabilidades:
Su papel es ayudar a los participantes a discutir sus experiencias relacionadas al propósito de la reunión. Esto se puede hacer de diferentes formas: manteniendo una conversación activa, validando el conocimiento de los participantes cuando sea posible, haciendo preguntas después de un comentario para aclarar las respuestas de los participantes, afirmando las ideas principales que ha escuchado, hablando con los participantes para clarificar que lo que escuchó como la idea principal es correcto, conectando la discusión con los objetivos de la reunión, alentando a todos los participantes para que participen, escuchando atentamente a todo momento, ayudando a los participantes a mantenerse enfocado en la conversación y también mantener orden con el uso del tiempo.

Su papel es obtener información y experiencias de los participantes para poder cumplir los objetivos de la reunión. No hay ningún problema en compartir información o ejemplos personales para ayudar al progreso de la conversación, sea breve. Si usted se da cuenta que está hablando más que los participantes de la reunión, se dará cuenta que usted está compartiendo más ideas personales que en vez de crear oportunidades para que los participantes expresen sus ideas.

Su papel no es ser un participante, ni hacer decisiones para el grupo. No haga ninguna promesa.

¡Este Preparado!

Diferentes puntos de vista
Hay muchas posibilidades que en la reunión existan diferentes puntos de vista. La dinámica del grupo es muy importante. Su trabajo consiste en apoyar al grupo con un diálogo justo y relacionado a la conversación, ayudar a los participantes a que se sientan seguros compartiendo sus perspectivas con el grupo. Haga entender al participante que la idea de la reunión no es llegar a un acuerdo sino al contrario la idea es escuchar todas diferentes opiniones. Recomiendo que los acuerdos de grupo se presenten antes de comenzar el diálogo. Sino se usa el acuerdo, usted como facilitador debe de compartir con los participantes la importancia de la regla de “estar de acuerdo con los desacuerdos”. El facilitador debe de hablar con los miembros del grupo acerca de lo que se puede y no se hablar fuera de la reunión sobre las ideas compartidas en el grupo.

Principios
Por motivos de consistencia es recomendado que el facilitador haga lo siguiente: sepa sus límites, sea respetuoso, se mantenga enfocado, interactúe honestamente, evite situaciones de conflictos de interés, se enfoque en el objetivo y en la autenticidad del proceso.

Pautas

Los participantes necesitan estar sentados para la discusión, lo mejor sería sentarse en círculo o hacer una media luna.
Al momento de hablar mire a todos lados, hable con todos no solo con algunos.
Sea consciente de su lenguaje corporal
Sea usted mismo
Haga que los participantes se sientan cómodos
Mire a todos
Hable con todos por lo menos una vez
Manténgase en el tema, use "Society of the Youth Discussion Guide".
Tenga buen uso del tiempo
Este preparado
Sea flexible
Cuídese
Una forma de comenzar la discusión es hacer preguntas abiertas
Preste mucha atención al lenguaje corporal no asuma que usted sabe lo que el participante esta pensando o sintiendo basado en su lenguaje corporal o expresión facial.
Tenga una mente abierta para escuchar perspectivas que son diferentes a las de usted.
Cuando aclare las ideas de los participantes evite desafiar las mismas.

Consejos

- Avísele a los participantes que el registrador estará escribiendo y esto es para estar seguros de obtener la mayor información posible. Al explicar esto el registrador prenderá la grabadora.
- Preste atención al tiempo y a la agenda. Ajuste el tiempo sin comprometer la agenda.
- El Hablador: cuando una persona este hablando y tome un descanso breve para agarrar un poco de aire, es un buen momento para intervenir y decir "gracias por su intervención, ahora escuchemos la opinión de otros.
- El Callado: diríjase a persona que no ha hablado y pregúntele, usted ¿qué piensa sobre lo que se dijo? Ó ¿qué agregaría la lo que se dijo?
- Si el grupo de participantes empieza a repetir lo mismo, intervenga y vuelva a enfocar al grupo en los objetivos de la reunión. Por ejemplo puede decir, "este es un asunto importante y me gustaría hablar de ese tema pero después de la reunión" ó "puede llamar al (número), si usted quiere"
- Terminar la conversación, pregunte si alguien tiene comentarios finales y agradezca a todos por su participación. Recuérdeles que tan importante es su participación y explíqueles que se va hacer con la información obtenida en la reunión.

Ejercicio "Let's go for it"
Materiales necesarios:
Grupo 1: Tarjetas con rol de facilitador, el anfitrión y el registrador y Grupo 2: Tarjetas con rol de los participantes. Un buen humor y diversión.

Tarjetas:
Cada tarjeta tiene una descripción de su rol y que es lo que tiene que hacer.

Instrucciones:
Formen grupos de seis, tres participantes necesitan tomar una tarjeta del grupo 1 y los otros tres necesitan tomar una tarjeta del grupo 2. Cada persona tendrá un rol y una tarjeta.

- Se debe de asumir que todos ya se conocen, y tienen los datos de su vecindario.
- El facilitador comenzará la discusión con la pregunta en la tarjeta del facilitador, todos los demás asumirán sus papeles como si estuvieran en una reunión hogareña.
- Usted tendrá 5 minutos para asumir ese papel. La persona que lleva el tiempo se encargará de avisarle cuando tiene que parar (usted tiene que parar), la persona actuando como facilitador tendrá un minuto para compartir su experiencia y como se sintió, lo que hicieron bien y lo que tienen que mejorar. La persona con el rol de anfitrión le dirá al facilitador en una oración lo que hizo bien y en otra lo que puede mejorar.
- Cada tarjeta se va a pasar hacia la derecha y el ejercicio se repetirá hasta que todos los participantes de su grupo experimenten con cada papel.

Aviso Legal
El contenido de la facilitación no es substituye el entrenamiento como facilitador. Es recomendado que si usted quiere continuar como facilitador reciba entrenamiento en otras áreas de facilitación.

Este documento fue adaptado usando C. Barrientos' Capacity Building and Technical Assistance Tools. Editado por George Ware. Traducido por Andrea Clinger.

GROUP PROCESSING: LEVELS OF HELPING
(From Taking Neighborhood Health to Heart Materials)

WAYS OF HELPING A GROUP PROCESS

A) DO NOTHING

a. Takes no action
b. May force group members to be independent, self responsible, handle own challenges
c. Allows "space" to think about what *should follow* if "nothing" doesn't work
d. Can raise tension, prompt behaviors that may not be desired but stem from members need for inclusion

B) DESCRIBE WHAT YOU SEE

a. Only describes your perception, does not interpret or suggest action
b. Reflects both verbal and nonverbal observtions
c. "Observation as a process" comment [meaning: tentative, data-based, does not evaluate & *may be risk-taking*]
d. Example, "I've noticed several in this group began talking but stopped…"

C) DESCRIBE YOUR FEELINGS

a. Report what you perceive is occurring and the associated feeling
b. Move from content or task to *feeling level*
c. Depending on phase of group, can isolate you or precede "turning point"
d. Eg: "I'm uncomfortable proceeding since X is not present and voiced concerns"

D) POSE A QUESTION

a. State what you see happening, shifts in interest/disinterest, ask group, discuss
b. Consult others, check perceptions
c. Verify if the question raised addresses collective concerns
d. Eg: "When you raised genetics, did anyone else feel the trust dropped?"

E) STRONG ACTION

a. Impose direction on group
b. Risky behavior for facilitator; use cautiously
c. Suggest a facilitative structure or action
d. Provide a "helping hand" – instruct on group theory or "teach why"
e. Refer back to operating agreements; group norms
f. Allow for thorough debriefing

PROCESAMIENTO DE GRUPO: NIVELES DE AYUDA
(From Taking Neighborhood Health to Heart Materials)

FORMAS DE AYUDAR UN PROCESO GRUPAL

A) NO HACER NADA

a. No toma acción

b. Puede forzar a los miembros del grupo a ser independientes, responsables, y cargar con su propios desafíos.

c. Permite dar un "espacio" para pensar acerca que es lo que sigue si "nada" funciona.

d. Puede incrementar la tensión, para provocar un comportamiento no deseado, un impulso para que los miembros comiencen incluir a los demás.

B) DESCRIBE LO QUE VES

a. Solo describa su percepción, que no sugiera una acción.

b. Refleja las observaciones verbales y no verbales.

c. Comentario sobre "La observación como proceso" [significa: tentativo, que es resultado de datos, no evalúa y puede ser riesgoso]

d. Ejemplo, "He notado que mucho miembros del grupo comenzaron hablando pero después pararon..."

C) DESCRIBE SUS SENTIMIENTOS

a. Reporte lo que usted percibe que esta ocurriendo y el sentimiento asociado con esto.

b. Muévase del nivel de tarea al *nivel de sentimientos.*

c. Dependiendo en la fase en la que se encuentre el grupo, usted se puede aislar o llegar a un punto de retorno.

d. Ejemplo: "Estoy incomoda con el proceso porque X no esta y no puede expresar su preocupaciones"

D) PLANTEE UN PREGUNTA

a. Diga que ve que esta pasando, un cambio de interés, o desinterés, pregunte al grupo, debata.

b. Consulte con otros, revise las percepciones.

c. si las preguntas que se han realizado tratan de las preocupaciones del grupo.

d. Ejemplo: "Cuando se hablo de la genética, ¿alguien mas sintió que se perdió la confianza?

E) ACCION FUERTE

a. Imponga un rumbo en el grupo.

b. Comportamiento riesgoso para los facilitadores, use precaución.

c. Sugiera una estructura facilitativas o una acción.

d. Otorgue una "mano de ayuda"- enseñe una teoría grupal o "enseñe porque…"

e. Consulte con los sistemas de acuerdo, normas de grupo.

f. Permita un cuidadoso informe.

FACILITATION AND RECORDING TRAINING CARDS

Facilitator

Let's get started, how long have you lived in this neighborhood and what specific actions do you think could be taken to increase physical activity among youth aged 10-14 in your neighborhood?

Recorder

Start the recorder and take notes during the discussion, including writing people's ideas on a white pad. Have an extra battery and check that the red light is on.

Talker

Be a "know-it-all" and answer all the questions. If someone else talks, start where they left off. Repeat yourself.

Quiet Person

Do not give eye contact. Don't answer questions unless called on. Respond very quietly and briefly answer, if called on.

Be Yourself!

Disagreeable

Disagree with others opinions and give your idea as a better idea

FACILITATION AND RECORDING TRAINING CARDS

(Spanish)

Facilitador

"Comencemos, ¿Cuánto tiempo ha vivido en este vecindario?"

" ¿Qué acciones específica que se necesita para que los jovenes entre las edades de 10 a 14 años del vecindario practiquen mas actividades físicas?"

Registrador

Prender la grabadora y tomar notas durante la discusión, esto también incluye escribir las ideas de los participantes en la pizarra. Tener una batería de repuesto y verificar que la luz roja de la grabadora este prendida.

Hablador

"Actue como un sabelo todo, y responde todas las preguntas"

Si alguien mas habla, empiece por continuar con la idea. Repita lo que dice.

Persona Callada

No haga contacto visual. No responda ninguna preguntas al menos que se lo pidan. Responda bien calmado y que su respuesta sea corta, si se lo piden.

SEA USTED MISMO

Persona Ingrata

No acepte las ideas de los demás y ofrezca sus propias ideas como si fueran mejor que las ideas de los demás

RECORDER RESPONSIBILITIES

Before the Participants Arrive:

- Put paper on the wall
- Put sitting area in a circle
- Set out food, nametags, sign-in sheet, tape recorder, pens

Introductions and Consent Process

- Help welcome people
- Ask people to sign in (name)
- Help people to get a name tag
- After facilitator has explained consent process, walk around and be sure people are putting their initials on every page and signing the forms in the correct place
- Collect consents and HIPAA forms and be sure they are all filled out correctly

During Discussion after Consents Collected:

- Turn on the recorder
- Take notes on the easel paper so people know they are heard

When the group is over

- Pass out incentives and get correct numbers from incentives recorded

RESPONSABILIDADES DEL REGISTRADOR

Antes que los participantes lleguen:

- Poner el papel en la pared
- Acomodar el área donde los participantes se sentaran en un círculo.
- Acomodar la comida.

Instrucciones y Procedimiento de consentimiento

- Ayudar a recibir a las personas
- Asegúrese que los participantes firmen la hoja de asistencia con su nombre.
- Ayudar para que las personas reciban una identificación con su nombre.
- Después que el facilitador explico el proceso de consentimiento, revise que las personas pongan sus iniciales en todas las páginas y que firmen las formas en el lugar correcto.
- Asegúrese de recolectar los documentos de consentimiento y las formas de HIPPA, y revise otra vez que todo este correcto.

Después de recolectar la formas de consentimiento y durante la discusión.

- Prenda la grabadora.
- Tome notas en el papel que esta en la pared para que así los participantes vean que sus opiniones son escuchadas.

Cuando el encuentro grupal termina

- Reparta los incentivos y escriba correctamente los números de los incentivos que esta entregando a los participantes.

FACILITATION RE-TRAINING 11/21/2009

Tension between research and community- Personal information- we are not allowed to ask people for their phone numbers or tell them we will contact them later- I have a protocol that says how I will contact people and what I can contact them for- you are all research assistants contracted by the university we are not allowed to contact them outside this study- At the end of the study we can give people an opportunity to be involved with a group or to form a group, but you cannot ask people if they want to be called, etc. You are in a position of authority and that violates ethical research standards.

Role of recorder:

- Support to the facilitator- to listen and record. You trust and respect the facilitator that they will ask the right questions and they will lead the session well. Your job is very important to make sure the recorder stays on and that you listen for everything the people say AND to write it up on the paper.
- Tape recorder – The tape recorder turned itself off in two out of the three sessions- Rebecca noticed it and turned it back on- Kat yours went off but it wasn't turned back on. Reminder- check the recorder, but don't be too obvious about it.
- The recorder should also be writing the group's ideas on the chart paper- at least 15 different ideas should be on the paper at the end of the session.

Role of facilitator- Two new concepts Leading and Fidelity-

- Fidelity- collecting the data we set out to collect – using the same methods, flow, and questions in every group, every time
- Leading- Any time you say- something like, do you think it would be a good idea to…. And they say yes- that is leading- I can't use that information. If you judge their responses- even if you just say oh that is a 'good idea'- that is leading. It makes people wonder if what they said earlier is not a good idea or if there is a right answer.
- Be really curious about them- you should avoid offering opinions or comments.
- We are so accustomed as a culture to seeing the problems and sometimes we don't feel powerful enough to think we can create solutions. This project is about daring ourselves and our communities to come up with solutions. Therefore we really need to help people think in a new way. We are looking for SOLUTIONS and ACTIONS read the focus question. So for instance if someone says safety is a problem. If I am looking for a solution- what would the facilitator say? If someone says there is not enough equipment in

the playground. How should a you need to ask what should be put in the playground

- People talking over one another- cannot hear what they said on the recording

Facilitator:"what could be done to improve the youth physical activity."

Participant: It think the parks are good; I am always with the kids so, but there are kids who go by themselves. I talked to my kids about all the dangers; I know there are kids that need more communication.

Facilitator: "What could you do to improve this?"

Participant:.. This is hard to help with because people don't trust each other.

Facilitator: This is true and sometime neighborhood parties work in order to create a relationship between neighbors.

Participant: I think we need this because it has not been done before.

Changes needed

- Does the focus prompt work?
- Does the guide provide an overview of the what will happen?
- Is there a good introduction question ready?
- Is confidentiality assured?

Appendix 3: Brainstorming Protocol and Packet

The Society of the Youth

Each packet has a Label with Society of the Youth, facilitator's name, space for the facilitator's name, the group number (1-4) and meeting number (1-3)

Adult Packets:

First Handout Folder

- 10 copies of the consent, HIPAA, Survey

Second Handout Folder

- 10 copies of consent and HIPAA for participants to take home

Facilitator's Folder

- Sign-in sheet with facilitator's name and group number and place to enter gift card information for first two meetings
- Sign-in sheet with facilitator's name and group number for third meeting with each group
- Facilitation guide for your meeting
- Sample group agreements, facilitation handouts

Facilitators be sure to have with you for each meeting:

- Tape recorder, extra battery
- Notepad with pen for recorder
- 12 Pens for participants
- 2 markers to write on chart paper
- Post-it pages chart paper
- Name tags
- Gift Cards

La Sociedad de la Juventud

Cada paquete tiene una etiqueta de Sociedad de jóvenes, el nombre del facilitador, el número del grupo (1-4) y el número de la reunión (1-3).

Paquetes de adultos:

Primera carpeta de folletos

- 10 copias de documentos de consentimiento, la forma HIPAA y la encuesta.

Segunda carpeta de folletos

- 10 copias de documentos de consentimiento y la forma de HIPPA para que los participantes lleven a casa.

Carpeta del facilitador

- Una hoja de asistencia con el nombre del facilitador y el número de grupo y un lugar donde se pueda apuntar la información sobre las tarjetas de regalo de las dos primeras reuniones.
- Una hoja de asistencia con el nombre del facilitador y el número de grupo para la tercera reunión para cada grupo.
- Una guía de facilitación para su reunión.
- Ejemplos de acuerdos de grupo, folletos de facilitación.

Los facilitadores necesitan tener lo siguiente para cada reunión:

- Una grabadora, con una batería de repuesto
- Un cuaderno con una pluma para el registrado.
- 12 plumas para los participantes
- 2 marcadores para escribir en la pizarra (bloc de papel)
- Hojas de un bloc de papel adheridles
- Etiqueta con su nombre
- Certificodo

Society of the Youth Discussion Guide- Meeting #1

WELCOME / OVERVIEW

1. Welcome guests and introduce yourself, saying ***"Welcome. Thank you for coming today to talk about what can be done to improve the neighborhoods for youth, especially so they can play more."***
2. ***We are going to be here about 2 hours today to have this discussion, including time for us to gather, get some snacks, do some paperwork, share our ideas, and get a gift certificate. So it will be a full two hours. We won't take a break in that time, but feel free to get more food and drink or go to the bathroom as you like. The bathrooms are located..***
3. We are going to invite you to introduce yourself, the neighborhood you live in, and the number of children you have (for adult groups) (or for the youth group ask what is one of the things you like to do the most, and how long they have lived in the neighborhood

PAPERWORK

1. Facilitator lets group know that we have some paperwork we need to review before the discussion begins- it is paperwork to be sure that everyone knows about the project and knows their rights while participating in this project- this paperwork is for YOU, for you to know your rights.
2. Note taker and facilitator hand out packets from folder called "First Handout"- let people know that they don't need to sign with their real name if they rather not.
3. Facilitator reads the consent form, stopping occasionally to ask people if they have questions
4. Facilitator asks everyone willing to participate to sign the consent form, and put their initials on the bottom of each page where initials are requested.
5. Facilitator reads the HIPAA form (summarize) and asks if there are any questions
6. Facilitator asks everyone willing to participate to sign the HIPAA form and put initials on the bottom of the first page.
7. Facilitator tells people this is the last page of paperwork before they get started and asks them to fill out the "questionnaire about me"
8. Note taker and/or facilitator collects all three documents from each person- paperclips documents from each person together and then puts a large paperclip on all the documents.
9. Facilitator hands out copies of consent and HIPAA forms for participants to keep (in Handout 2 folder)

DISCUSSION

"Again thank you all for being here. Each of you have been invited because you have an important voice, you are the expert. You know about your community in a way that only community members do. You know what works and doesn't work for you and the children in your community.

Your participation builds on previous work done in your neighborhood

- Residents of five neighborhoods and the University of Colorado Denver have been partnering for the last two years
- All of you may have taken a survey so we can learn about the health of the community
- The purpose of today's meeting is to learn how to improve the neighborhoods for youth, so they can get outside and play more.

Today we are going to start a conversation that will take place over three different meetings. If you cannot participate in other meetings, your work here will be very valuable. If you can participate in other meetings that will be very helpful to the community. The first meeting today will be about brainstorming, this means we share our ideas without critiquing or challenging each other's ideas- we just offer our own ideas and listen to others. _____ (the recorder's name) will write down your ideas as you say them and we area also recording this so we are sure to get all your ideas.

Again feel free to get up and help yourself to food or to go to the restroom. Are there any questions?

We have found as part of group discussions it is helpful for the group to come up with group agreements. For instance one request we have is that people speak one at a time so the microphone will record what you are saying, other agreements we have seen include respect for each person's ideas, are there other agreements you think will help the discussion go smoothly?

Write up the agreements..

First we will talk about some of the things that keep kids from playing outside. Later we will talk about how we can get kids out playing more.

So to start us out, why don't kids who are 10-14 years old get out and play more in this neighborhood? (spend about 15 minutes on this)

Now we are going to shift the conversation to solutions. So please write down or think of 3 ideas you have for the following question:

What changes would you like to see to increase physical activity among 10-14 year old youth? [start general, then move to…
in schools
in parks
in neighborhoods
in households]

(NOTE TO FACILITATOR Give the group a few minutes and then ask them to share- you can go around the table asking for a volunteer and when someone gives an idea spend some time with that idea- be interested in their idea- for example if they say something like make the neighborhood safer- ask something like, "how could that be done?" or if they say improve the parks, ask something like "what specifically would you want to see improved?") or if they say they want to lessen traffic, you could ask "what could be done to make the traffic safer?"

If people get stuck some questions you can ask:

1. What could we do as a community to get kids to be more active outside?
2. What actions would you take if you had several million dollars? What if you didn't have any money at all?
3. Talk about particular places or times when you notice children being active. What do you think is different about these places from others? OR
4. Why do you think kids are more active in some places and not others? what's present, what's not?

Sociedad de jóvenes guía de discusión

BIENVENIDA/ INTRODUCCIÓN

1. Recibir a los invitados y hacer una introducción personal, diciendo "Bienvenidos. Gracias por estar aquí el día de hoy para conversar acerca de lo que podemos hacer para mejorar los vecindarios, específicamente para que los jóvenes puedan jugar mas."
2. El día de hoy nosotros vamos ha estar aquí alrededor de 2 horas para tener esta conversación, este periodo de tiempo incluye, tiempo para reunirnos, tener un refrigerio (comer algo), hacer papeleo, compartir algunas ideas, y al final darles un certificado. Así que utilizaremos las 2 horas completas. Nosotros no vamos a tener descansos, pero por favor siéntanse con la libertad de servirse más refrigerio o ir al baño. Los baños están localizados en …..
3. Nosotros queremos invitarles a que nos conozcamos diciendo su nombre, el nombre del vecindario en el que usted vive, y el numero de niños que usted tiene [o algo que a usted le guste hacer (para los grupos de jóvenes)], y como tiempo lleva viviendo en el vecindario

PAPELEO

1. El organizador le explica al grupo que tenemos unos documentos que se tienen que revisar antes de comenzar la discusión. Estos documentos es para asegurarse que todos sepan acerca del proyecto y también saber cuales son sus derechos como participantes del proyecto mientras están participando – este papeleo es para USTED, para que usted conozca sus derechos.
2. La persona que va ha tomar notas y el organizador entregaran los papeles de la carpeta llamados "First Handout" (primer folleto) e informaran a los participantes que no tienen que firmar con su nombre real sino lo desean.
3. El organizador lee el documento de consentimiento y debe de parar de vez en cuando para preguntar si alguno de los participantes tiene preguntas.
4. El organizador pide a los participantes que están interesados en participar que firmen el documento de consentimiento y que pongan sus iniciales en la parte posterior de cada página como lo indica el documento.
5. El organizador lee la forma HIPPA (un resumen) y pregunta si hay alguna pregunta.
6. El organizador pregunta a los participantes que si están de acuerdo en participar firmen la forma HIPPA y escriban sus iniciales en la parte de abajo de la primera pagina.
7. El organizador le dice a los participantes que esta es la ultima pagina de los documentos antes de empezar y les pide que completen el cuestionario "questionnaire about me" (cuestionario sobre mi).
8. El registrador y/ó el organizador recoge los tres documentos de cada persona- la persona que los recoge debe de separar los paquetes de cada persona con un sujetador de papeles, y después pone todos los documentos juntos con un sujetador de papel grande.

9. El organizador entrega las copias del documento de consentimiento y de la forma HIPPA a los participantes (estos se encuentran en la carpeta del Handout 2).

CONVERSACION

Gracias por estar aquí otra vez. Cada uno de usted ha sido invitado porque su opinión es importante y ustedes son los expertos. Ustedes conocen su comunidad de la forma que solo los miembros de esta lo hacen. Ustedes saben lo que funciona y lo que no funciona para usted y sus hijos en su comunidad.

Su participación en el día de hoy se basa en trabajo anterior que se ha hecho en su vecindario
- Residentes de cinco vecindarios y la Universidad de Colorado Denver han trabajado juntos en los últimos dos años
- Todos ustedes pudieron haber contestado un cuestionario por el cual nosotros aprendimos sobre de la salud de la comunidad
- El propósito de la reunión de hoy es para aprender cómo mejorar las condiciones del vecindario para que la juventud salga a jugar.

Hoy vamos a comenzar la conversación que se va a extender a tres reuniones, su contribución es valiosa. Su participación en las otras reuniones ayudara mucho a su comunidad. En esta primera reunión vamos a concentrarnos en producir ideas, esto significa compartir opiniones e ideas sin críticas ni enfrentamientos entre los miembros del grupo. Ofreceremos nuestras ideas y escucharemos a los demás. Antonio anotara sus ideas conforme usted las exprese, esta discusión también será grabada para garantizar que todas las ideas sean escuchadas.
¿Alguna pregunta?

Una vez mas siéntase libre de levantarse y servirse algo de comer o para ir al baño. ¿Hay alguna pregunta?

Como parte de grupos de discusión, nosotros hemos encontrado que es bueno poner reglas o acuerdos. Por ejemplo una petición que tenemos es que las personas que participen hablen una a la vez, así el micrófono registrará lo que usted dice, otros acuerdos que hemos visto incluyen respeto para las ideas de cada persona; todas las ideas son importante aunque algunas veces usted no este de acuerdo. ¿Hay otros acuerdos que usted piense ayudarían para que la conversación del grupo sea amena?

Escriba los acuerdos.

Bueno comencemos con la producción de ideas.

Primero hablaremos de las cosas que impiden a los niños jugar afuera y luego conversaremos de los cosas que creemos que puedan ayudarlos a jugar afuera.

¿Porque los niños que la edad entre diez y catorce años no salen a jugar más a menudo? (spend about 15 minutes with this)

Ahora vamos a conversad sobre soluciones. Por favor piense en tres ideas con respecto a la pregunta anterior:

(NOTE TO FACILITATOR Give the group a few minutes and then ask them to share- you can go around the table asking for a volunteer and when someone gives an idea spend some time with that idea- be interested in their idea- for example if they say something like make the neighborhood safer- ask something like, "how could that be done?" or if they say improve the parks, ask something like "what specifically would you want to see improved?") or if they say they want to lessen traffic, you could ask "what could be done to make the traffic safer?"

¿Qué cambios les gustaría a hacer para incrementar la actividad física entre niños de diez a catorce anos de edad?
(Empiece hablando de forma general y de ahí continúe con los siguientes temas:
En la escuela
En los parques
En los vecindarios
En los hogares

Si los participantes se estancan en alguna de las pregunta, usted puede hacer las siguientes preguntas:

1. ¿Qué podemos hacer como comunidad para incrementar la actividad física de los niños?
2. ¿Qué acción tomaría usted si tuviera muchos millones de dólares disponibles? ¿Y si no tuviera nada de dinero?
3. Hable de lugares en particular o un tiempo en específico donde usted cree que los niños son más activos. ¿Cual es la diferencia de estos lugares comparados a otros? O
4. ¿Por que piensa que los niños son mas activos en estos lugares en comparación con que en otros lugares? ¿Qué es los que tienen o lo que no tienen?

Consent Materials- One Example of Many Consent Forms. There were consent forms for Advisory Group Members and Concept Mapping Participants, each with Adult, Child, English and Spanish Versions

Date: **Valid for Use Through:**

Study Title: The Society of the Youth

Principal Investigator:	**Stephanie L. Phibbs**
COMIRB No:	**08-1388**
Version Date:	**4/6/09**
Version #:	**4/6/09**

In this form, we use the words "you" and "your." If you are reading this form and deciding for your child, the words 'you' and 'your' refer to that other person, not to you.

You are being asked to be in a research study. This form provides you with information about the study. A member of the research team will describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

Why is this study being done?

This study plans to learn more about what community members think is needed to improve our communities for youth, especially how to increase physical activity among youth in our neighborhoods.

You are being asked to be in this research study because you live in Aurora, Park Hill, Stapleton, or East Montclair neighborhoods.

Other people in this study

Up to 500 people from your area will participate in the study.

What happens if I join this study?

If you join the study, you will be in one or more group discussions where you provide ideas about what can be done to improve our neighborhoods for youth.

Your participation will last 2 hours for each discussion. You can participate in up to 3 discussions.

What are the possible discomforts or risks?

Discomforts you may experience while in this study include discomforts of talking in groups with people from your neighborhood.

What are the possible benefits of the study?

This study is designed for the researcher to learn more about what changes to the neighborhood would benefit youth.

This study is not designed to treat any illness or to improve your health. Also, there may be risks, as discussed in the section describing the discomforts or risks.

Who is paying for this study?

This research is being paid for by The Robert Wood Johnson Foundation.

Will I be paid for being in the study?

You will be paid $*15* for participating in a group meeting to provide ideas of how to improve the neighborhood. You will be paid $15 to rate ideas. The last meeting will be a community meeting with results and you will not be paid to participate in that study. If you leave the study early or only participate in the last meeting, or if we have to take you out of the study, you will be paid only for the meeting you have completed.

It is important to know that payments for participation in a study is taxable income.

Will I have to pay for anything?

It will not cost you anything to be in the study.

Is my participation voluntary?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. If you refuse or decide to withdraw later, you will not lose any benefits or rights to which you are entitled.

Can I be removed from this study?

The study doctor may decide to stop your participation without your permission if the study doctor thinks that being in the study may cause you harm, or for any other reason.

Who do I call if I have questions?

The researcher carrying out this study is Stephanie Phibbs. You may ask any questions you have now. If you have questions, concerns, or complaints later, you may call Stephanie Phibbs at 303-724-1080. You will be given a copy of this form to keep.

You may have questions about your rights as someone in this study. You can call Stephanie Phibbs with questions. You can also call the Colorado Multiple Institutional Review Board (COMIRB). You can call them at 303-724-1055.

What Will Happen to my Recorded Information?
In this study we will be recording the group discussion. We will use digital audio recordings and notebooks. We will keep this information secure and private. We will store it for up to 50 years. At the end of that time, we will destroy it.

Things That Must be Reported to The Authorities

We respect your right to privacy. But there are some things we cannot keep private. If you give us information about child neglect or child abuse, we have to report that to Social Services. If you give us information about someone hurting someone else, we have to report that to the police. If a court orders us to hand over your study records, we have to hand them over to the court.

Who will see my research information?

We will do everything we can to keep your records a secret. It cannot be guaranteed.

Both the records that identify you and the consent form signed by you may be looked at by others. They are:

- People at the Colorado Multiple Institutional Review Board (COMIRB)
- The study doctor and his/her team of researchers.
- *The Robert Wood Johnson Foundation* who is the organization paying for this research study.
- Officials at The University of Colorado, Denver who are in charge of making sure that we follow all of the rules for research.

We might talk about this research study at meetings. We might also print the results of this research study in relevant journals. But we will always keep the names of the research subjects, like you, private.

We will ask you to sign a different form that talks about who can see your research records. That form is called a HIPAA form. It will mention companies and universities who will see your research records.

You have the right to request access to your personal health information from the Investigator.

This authorization does not expire. However, you may withdraw this authorization for use and disclosure of your personal health information by providing written request to the Investigator. If you withdraw this authorization, the Institution, the Investigator, the research staff, and the research Sponsor will no longer be able to use or disclose your personal health information from this study, except so far as that they have already relied on this information to conduct the study.

Agreement to be in this study

I have read this paper about the study or it was read to me. I understand the possible risks and benefits of this study. I know that being in this study is voluntary. I choose to be in this study: I will get a copy of this consent form.

Signature:_____ Date:_____

Print Name:_____

Consent form explained by:_____ Date:_____

Print Name: _____

Investigator:_____ Date:_____

[If Applicable, Signature Line for studies with children ages 13-18 who can read this form (children 7-13 should sign a SEPARATE assent form; for children 0-7, the parents are consented.)

_____ Date_____
Child

Consent form explained by: _____Print Name _____
Date_____

Investigator _____ Date _____

Appendix 4: Sorting Protocols

Recruitment Script

If they did participate in a previous discussion:
Hello. My name is ____ and I'm calling with the Society of the Youth. May I talk with _____?
If they are not home- is there a good time when I could reach them or a better number I could use to reach them? Thank you.

Hi mam/sir. You came to an earlier meeting where you gave your ideas about how to make the neighborhoods better for youth. Now we have collected ideas from multiple neighborhoods and are ready to invite you back to one more session to sort out the different ideas and to rate the different ideas. If you can make it to this session you will be given a $20 gift card. We would like to meet this weekend, on Saturday, at the Martin Luther King Library at x:00? Would you be available?

If they are not available: you can say- your opinion really counts so we would be willing to meet at a time that works for you if you can't make this Saturday- we would even be willing to come to your house if you prefer.

If they didn't participate in a previous discussion say:
Hello, My name is x can I please talk with y? Thank you.

If they are not home- is there a good time when I could reach them or a better number I could use to reach them? Thank you.

Hello mam/sir, my name is x and I'm with the Society of the Youth.
We received your name and phone number from an earlier survey you did with the University of Colorado and taking neighborhood health to heart. On the survey you completed you said it would be okay to call you back for other projects.

Your name has been randomly selected to represent opinions in your neighborhood- to tell us what you think are the most important things to do for youth in our neighborhoods. We would like to give you a $20 gift card to King Soopers or Target to meet at the MLK library and participate in a group that sorts and ranks different ideas from the neighborhood. Would you be able to meet with us this weekend on Saturday?

If they say they are not available say:
If not, well your opinion is really so important that we would be willing to meet with you at a time and place that works for you, we'd even come to your house if you'd like. Could we arrange a time to come meet with you? Thanks,

Participant Materials
Instructions Overview

This packet has complete instructions and data collection forms for three key activities:

- Activity 1: Participant questions
- Activity 2: Sorting Statements into groups and recording results
- Activity 3: Rating how need and possible each of the statements is

For **Activity 1**: Participant questions, you should have:

- Survey about me

For **Activity 2**: Sorting and Recording, you should have:

- Instructions- Sorting and Recording
- For Step 1, the statements in a deck of cards
- For Step 2, Sort recording sheet

For **Activity 3**: Rating, you should have:

- "Needed" rating recording sheets
- "Possible" rating recording sheets

Please follow the instructions given very carefully; a few small errors can change the final results.

- Please return this packet to the facilitator when you are done.

Activity 2- Instructions for Sorting and Recording

Step 1- Sorting the Task Statement Cards. You will be given a deck of cards with one statement on each card. Each card has a statement in English and Spanish and an ID number. We would like you to group the statements in piles that make sense to you, following these guidelines:

- Group the statements for how similar in meaning they are to one another. Do not group the statements by how important they are, how much you like them, etc. You will do some of that in later steps
- There is no right or wrong way to group statements. You will probably find that you could group the statements in several different sensible ways. Put cards in piles in a way that feels best to you.
- People differ on how many piles they wind up with. In most cases, anywhere from 10-20 piles works well.
- A statement can be put alone in its own pile. If you think it is not related to all the other statements or it stands alone as a unique idea put it alone. Do not have any piles of "miscellaneous" or "other" statements.
- Make sure every statement is put somewhere. Do not leave any statements out.

Step 2- Recording the Results. You also have in this packet a Sort Recording Sheet for recording the results of your groupings. On that sheet please write the results as described below. An example of how to record a pile is shown in the first box on the Sort Recording Sheet

- Pick up any one of your pile statements. It does not matter which pile you start with.
- Quickly read the statements in the pile, and then write down a short title that describes the pile on the line provided after ***Pile Title or Main Topic*** in the first available box on the Sort Recording Sheet.
- In the space under the pile name, write the statement identification (ID) number of each card in that pile. Separate the numbers with commas. When you finish with the pile, put it aside so you don't record it twice by mistake.
- Move on to your next pile and repeat the three steps above, recording the statement numbers in the next available box on the Sort Recording Sheet. Continue in this way until all your piles have been named and recorded
- Your Sort Recording Sheet has room for you to record up to 20 piles or groups of cards. As mentioned above, any number of piles (usually 10-20 is fine. If you have more than 20 piles, ask for more Recording Sheets

Please write clearly. Most of the errors we have are made at this stage and are due to data that is hard to read.

When you have recorded all the piles, please go to Activity 3- Rating.

Activity 2- Step 2
Sort Recording Sheet continued

This sheet is to be used to record your results. Remember you do not have to have as many piles as there are boxes on this sheet. There are many boxes because different people will create different numbers of piles. The first box (example pile) is filled out to be a guide for you.

Example Pile Title or Main Topic: Playground Changes
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas
1,4, 29, 34, 50

Start recording your piles here:

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____
Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Pile Title or Main Topic: _____

Record here each of the ID numbers for the ideas in this pile, separating the numbers with commas

Appendix 5: Rating Protocols

Society of the Youth

Activity 3: Ratings for Phone and In-Person Interviews

ENGLISH: Packet #_____
To increase physical activity among 10-14 year olds in your neighborhood, how needed would you say it is to (read statement) ; 1 is not at all needed, 5 is most needed;
And how possible would that be? 1 is not at all possible and 5 is most possible? (record response, repeat)
SPANISH:
Para aumentar la actividad física entre los jovenes de 10-14 años de edad en su vecindario, ¿qué tan necesario es ..(read statement, record response); 1 no es necesario, 5 es lomás necesario.
¿Y que tan posible sería que (leer la idea de más arriba) ? 1 no es posible y 5 es muy posible. (record, repeat)

1	Need____ Poss_____	Have more mentors to encourage physical activity/Tener más mentores para promover la actividad física
2	Need____ Poss_____	Improve safety in recreation centers/Mejorar la seguridad en los centros de recreación
3	Need____ Poss_____	Have older youth watch younger kids outside to create safety/Tener jóvenes afuera cuidando a los más pequeños para crear seguridad
4	Need____ Poss_____	Have "responsible" parents and adults in the park and neighborhoods to watch over kids/Tener padres y adultos "responsables" en parques y vecindarios para cuidar a los niños
5	Need____ Poss_____	Get a group of people to commit to reporting bad activities to the police /Conseguir un grupo de personas que se comprometan a reportar actividades malas en el vecindario a la policía
6	Need____ Poss_____	Have adults pay more attention to their children and check on them/Que los padres les presten más atención a sus hijos y los chequen
7	Need____ Poss_____	Have a volleyball court close to home/Tener un parque para jugar volleyball cerca a la casa
8	Need____ Poss_____	Open/unlock tennis courts for things like roller-skating/Abrir el accesso a campos de tenis para practicar otras actividades como por ejemplo, el patinaje
9	Need____ Poss_____	Make more places to lift weights, do aerobics, and play sports/Construir más lugares para levantar pesas, hacer ejercicios aeróbicos, y hacer otros deportes
10	Need____ Poss_____	Have parents get their children involved/Que los padres apoyen a sus hijos para que se involucren en mas actividades
11	Need____ Poss_____	Use the park at Fitzsimmons/Utilizar el parque en el campo Fitzsimmons
12	Need____ Poss_____	Have snowman building competitions/Hacer competencias de construcción de hombres de nieve
13	Need____ Poss_____	Take and teach children to ski or snowboard/Llevar y enseñar a los niños a esquiar o snowboard
14	Need____ Poss_____	Provide a multi-sport facility where children can participate in tournaments **and** sports camps/Proveer lugares donde los niños puedan participar en torneos y campamentos

deportivos

15 Need____ Poss_____ Go to the pool/Ir a la alberca/piscina

16 Need____ Poss_____ Have a scavenger hunt where you go to look for different things like pine cones and birds with your family/Organizar una búsqueda de tesoros en un parque donde uno busque diferentes cosas como bellotas y pájaros con la familia

17 Need____ Poss_____ Have kids do activities like sports/Hacer que los niños hagan actividades, como deportes

18 Need____ Poss_____ **Give** youth season passes to amusement parks, like Elitches or Water World, where they can be active/ Entregarle a los jóvenes pases de temporada a parques de diversión como Elitches o Water World donde puedan mantenerse físicamente activos

19 Need____ Poss_____ Make playgrounds better with different equipment, like zip lines and more creative stuff/Mejorar los parques infantiles con diferente equipo como tirolinas y cosas más creativas

20 Need____ Poss_____ Make the parks prettier with flowers and trees/Poner los parques más bonitos con árboles y flores

21 Need____ Poss_____ Set up more biking paths to places you want to go, **like schools or shopping/**Crear más rutas de ciclismo para ir a lugares donde uno quiera ir, como la escuela y el centro comercial

22 Need____ Poss_____ Make a closer ice skating rink/Hacer una pista de patinaje más cercana

23 Need____ Poss_____ Have chaperones (adult volunteers) take kids out of the city for fieldtrips /Conseguir chaperones (adultos voluntarios) para llevar a los niños a excursiones fuera de la ciudad

24 Need____ Poss_____ Have more stretching and warm up for sports/Aumentar los ejercicios de estiramiento y calentamiento antes de hacer deportes

25 Need____ Poss_____ Have parents volunteer to staff the school playgrounds after school/Tener padres voluntarios para supervisar los parques infantiles después de la escuela

26 Need____ Poss_____ Have a football field close to home/Tener un campo de football futbol cerca a la casa

27 Need____ Poss_____ Make basketball tournaments/Hacer torneos de baloncesto

28 Need____ Poss_____ Teach kids about everyday fitness, like walking to school or the grocery store; walking the dog)/Enseñar a los niños que se puede incorporar ejercicio a las actividades de la vida diaria, como por ejemplo ir caminando a la escuela, al supermercado; sacar al perro a caminar)

29 Need____ Poss_____ Have a dog to walk or other animals to interact with/Tener un perro para sacar a caminar u otros animales con quien interactuar

30 Need____ Poss_____ Put in traffic bumps to slow traffic/Poner topes para reducir la velocidad del tráfico

31 Need____ Poss_____ Give people a way to report crime anonymously/ Ofrecer una opción anónima para que la gente pueda reportar crímenes

32 Need____ Poss_____ Have more recreation centers around the neighborhood/Construir más centros de recreación en los vecindarios

33 Need____ Poss_____ Train or educate adults to facilitate youth physical activities/Capacitar o educar a los adultos para que puedan guiar o dirigir las actividades físicas entre los jóvenes

You are Doing Great!

34 Need____ Poss_____ Have more organized sports in elementary schools/Implementar deportes en equipo en

			las escuelas primarias
35	Need____	Poss_____	Have snowball fights/Tener peleas de nieve
36	Need____	Poss_____	Educate people on how to report crime and what to look for/Educar a la gente en como reportar crimenes y como detectarlo
37	Need____	Poss_____	Have geogames (where people use a map and compass to find different "treasures")/Hacer juegos geográficos conocidos como "geos" o "geojuegos" (Juegos donde se usa un mapa y compás para encontrar diferentes tesoros)
38	Need____	Poss_____	Add security cameras around the recreation center to keep it safe/Poner cámaras alrededor de los centros de recreación para mejor la seguridad
39	Need____	Poss_____	Have fences to keep kids from running in streets/Poner cercas para prevenir que los niños corran a las calles
40	Need____	Poss_____	Have community members report license plates of people doing bad things- so reports are anonymous/ Que los miembros de la comunidad reporten las placas de las personas que esten haciendo cosas malas, y que los reportes sean anónimos
41	Need____	Poss_____	Take students on a free snowboarding trip with school/Llevar a los estudiantes a un viaje gratuito para practicar snowboarding
42	Need____	Poss_____	Open the paddle boats in the parks more often/Abrir los botes de pedal en los parques más seguido
43	Need____	Poss_____	Make police more visible/Que la policía este más visible
44	Need____	Poss_____	Have more skate parks for kids on wheels, like skateboards, rollerblades, etc/Construir más parques para los niños que les gustan las bicicletas, patines y patinetas
45	Need____	Poss_____	Take kids out walking with lunches, hygiene kits to give to the homeless- kids contributing to the community/Salir a pie con los niños llevando almuerzos y kits higiénicos para dar a los desamparados, asi los niños pueden contribuir a la comunidad
46	Need____	Poss_____	Parents ride bikes with kids, have a family ride/Que los padres salgan a paseos familiares de bicicleta con los niños
47	Need____	Poss_____	Have less expensive band instruments, uniforms, equipment/Proporcionar instrumentos de bandas musicales**,** uniformes y equipo deportivo más económicos
48	Need____	Poss_____	Have music and more affordable after-school activities/Tener clases de música y actividades extracurriculares mas económicas
49	Need____	Poss_____	Make available free or rentable sports or activity equipment/Ofrecer equipos deportivos para usar de forma gratuita o para alquilar
50	Need____	Poss_____	Have parents take children to the park/Que los padres lleven a sus hijos a los parques
51	Need____	Poss_____	Reduce costs of recreation centers/Reducir el costo de los centros de recreación

Great we are over 1/2 way done- thanks for helping priotize activities for your community! Bueno! Ya hemos hecho más de la mitad. Gracias por ayudarnos a priorizar las actividades en su comunidad!

52	Need____	Poss_____	Have a walk-a-thon/ Organizar una caminata en la que participe mucha gente

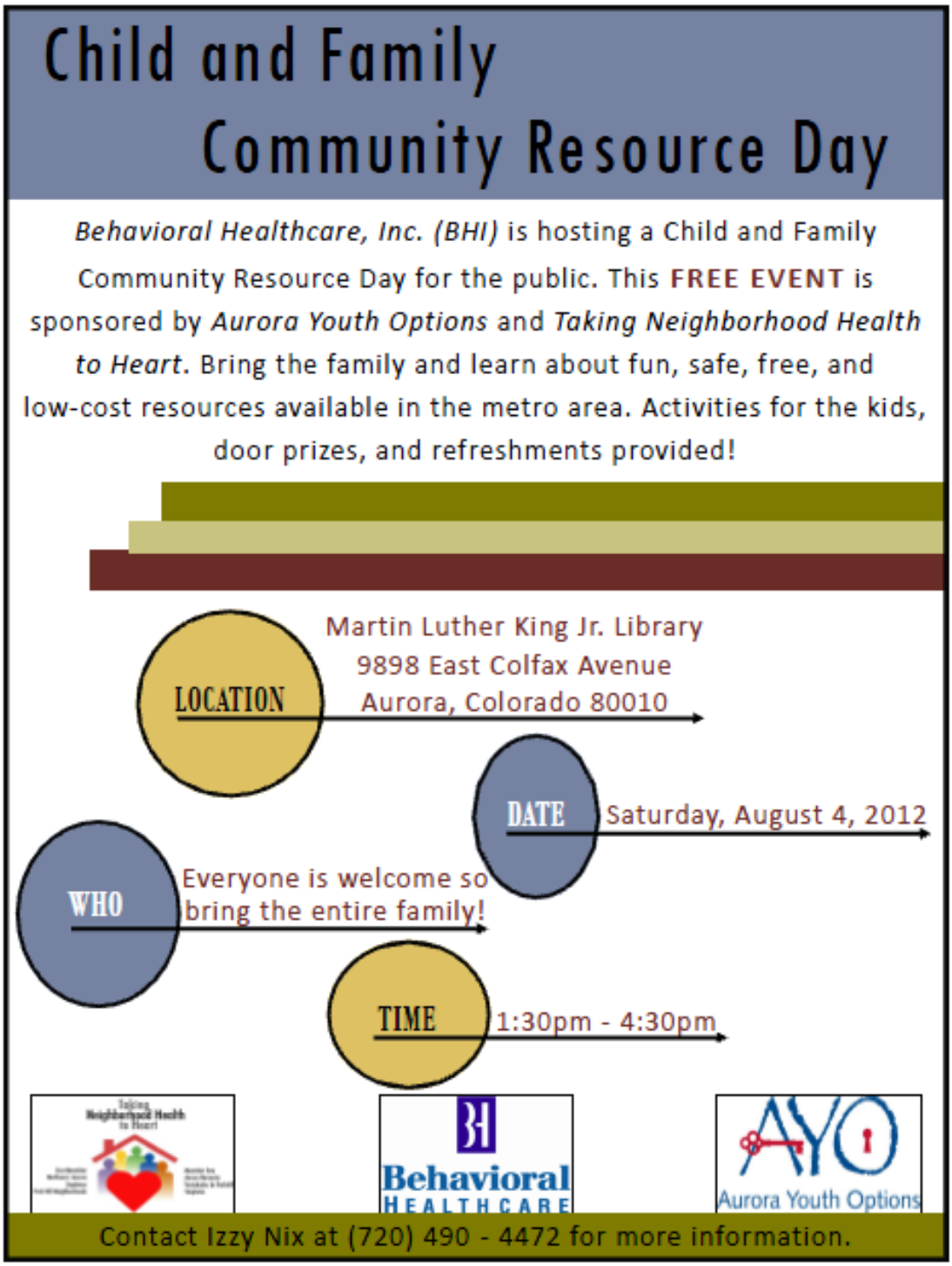
53	Need____ Poss_____	Provide more physical activities in schools/Ofrecer más actividades físicas en las escuelas
54	Need____ Poss_____	Provide more security and protection for the kids and youth/Otorgar más seguridad y protección para los niños y jóvenes
55	Need____ Poss_____	Have a gym for dance competitions/Tener un gimnasio para hacer competencias de baile
56	Need____ Poss_____	Go for a field trip snow shoeing or ice skating/Ir de paseo a patinar sobre hielo o a caminar en la nieve con zapatos especiales para la nieve
57	Need____ Poss_____	Get rid of unproductive businesses, because they are crime magnets /Deshacerse de negocios malos que atraigan el crimen
58	Need____ Poss_____	Have more kids walk or bike to school/Incrementar el número de niños que caminen o vayan en bicicleta a la escuela
59	Need____ Poss_____	Make a safe place for kids to go during summer or spring breaks/Hacer lugares seguros donde los niños puedan ir durante las vacaciones
60	Need____ Poss_____	Create more parks, playgrounds, and open places to play/Crear más parques, parques infantiles y lugares al aire libre donde puedan ir a jugar
61	Need____ Poss_____	Create a game of urban survivor/Crear un juego de sobre vivencia urbana
62	Need____ Poss_____	Take students on backpacking,hiking or camping trips/Llevar a los estudiantes a viajes de exploración para acampar y escalar
63	Need____ Poss_____	Vote to be sure programs like PE classes are not cut from schools/Votar para asegurarse de que no corten las clases de educación física en las escuelas
64	Need____ Poss_____	Have a recreation center with free activities/Tener un centro de recreación donde se ofrezcan actividades gratis
65	Need____ Poss_____	Have students get up and walk or do some activity every 20 minutes at school/Que los estudiantes se levanten y caminen, o hagan algún tipo de actividad cada 20 minutos en la escuela
66	Need____ Poss_____	Create more sports and activities for kids/Crear más deportes y actividades para los niños
67	Need____ Poss_____	Put a fence around playgrounds so kids feel safer/Cercar alrededor de los parques infantiles
68	Need____ Poss_____	Protect children from traffic/Proteger a los niños del tráfico
69	Need____ Poss_____	Set up different activities and stations in the park for the whole family/Crear diferentes actividades y diferentes estaciones en los parques para toda la familia
70	Need____ Poss_____	Give youth something positive to do, a program to clean up neighborhood, help the elderly, make them feel worthwhile, like they have a purpose, like they count/Dar a la juventud tareas positivas, como un programa para limpiar el vecindario, ayudar a los ancianos, algo que los haga sentirse que valen la pena, que tienen un propósito, que cuentan
71	Need____ Poss_____	Have people talk at back-to-school night to tell others about opportunities to be active/Traer personas en el dia de la matricula escolar para que hablen sobre oportunidades para mantenerse activos
72	Need____ Poss_____	Clean up the litter and graffiti in my neighborhood and neighborhood parks/Recoger la basura de mi vecindario y los parques de mi vecindario y limpiar las paredes pintadas.

73	Need____	Poss_____	Have hopscotch, hula hoops, jump ropes, "four square" tournaments after school/Hacer torneos de rayuela, aros de hula (hula hoops), o de saltar cuerdas, o de cuatro cuadras después de escuela
74	Need____	Poss_____	Give kids freedom to be outside and let them know not to talk to strangers/Darle libertad a los niños para que estén afuera y enseñarles que no deben hablar con extraños
75	Need____	Poss_____	Make travel safer to parks, recreation centres, and schools /Poner medidas de seguridad en las calles para que sea más seguro ir a los parques, centros de recreación, y escuelas
76	Need____	Poss_____	Provide more interesting activities to involve the whole community/Ofrecer más actividades interesantes para que toda la comunidad participe
77	Need____	Poss_____	Protect kids from gang members and bullies/Proteger a los niños de pandilleros y abusivos
78	Need____	Poss_____	Have a community history trivia contest/Hacer un concurso de trivia sobre la historia de la comunidad
79	Need____	Poss_____	Have bungee jumping/Practicar el salto de caída libre o bungee jumping
80	Need____	Poss_____	Have free youth activity time at the rec centers for swimming, basketball and other activities/Tener actividades para los jóvenes de forma gratuita en los centros de recreación, como natación, beisbol, baloncesto y otras actividades
81	Need____	Poss_____	Put in new street lights/ Poner más postes de luz en las calles
82	Need____	Poss_____	Organize everyone to turn on porch lights to make the neighborhood safer/Organizar a todos para poner luces en la fachada de las casas para hacer los vecindarios más seguros
83	Need____	Poss_____	Build more walking paths and trails nearby/Construir más veredas y caminitos para salir a caminar
84	Need____	Poss_____	Jump rope at home/Saltar cuerda en casa
85	Need____	Poss_____	Have kids involved with after-school activities because they are safe/Que los niños se involucren en actividade**s** especiales (después de escuela) porque son mas seguras
86	Need____	Poss_____	Dance in class or at school/Ofrecer clases de baile en la escuela durante en dia o después de la escuela
87	Need____	Poss_____	Give prizes to encourage physical activity/Dar premios para fomentar la actividad física
We're almost done; thanks for taking the time to have your voice heard. Ya casi hemos terminado. Gracias por dar su opinión			
88	Need____	Poss_____	Enforce curfew laws/Hacer cumplir las leyes de toque de queda, que prohiben que los niños anden solos en las calles por la noche
89	Need____	Poss_____	Have music, block parties to draw people out/Tener música, fiestas de vecindario para atraer a la gente
90	Need____	Poss_____	Have teachers give less work over the weekends so students have more time to play and do activities/Que los maestros den menos tareas los fines de semana para que los estudiantes tengan mas tiempo para jugar y hacer otras actividades
91	Need____	Poss_____	Go to summer camp/Ir a campamentos de verano
92	Need____	Poss_____	Give money to schools to supervise kids after school - enrichment activities and physical activity, especially for girls/Incrementar el dinero a las escuelas para que supervisen a los niños después de la escuela y ofrecer programas/actividades de enriquecimiento y actividad fisica, especialmente para las niñas

93	Need____ Poss_____	Reduce sport fees, especially for families with multiple kids/Reducir el precio de los deportes, especialmente para familias con varios niños
94	Need____ Poss_____	Encourage kids to spend less time watching TV and using computers /Fomentar a los niños el que pasen menos tiempo mirando TV y usando la computadora
95	Need____ Poss_____	Build more businesses, restaurants and other places in the neighborhood that people can walk to/Construir más negocios, restaurantes, y otros lugares en los vecindarios donde la gente pueda ir caminando
96	Need____ Poss_____	Unlock school playgrounds so they can be used after school hours and during breaks/ Abir los parques infantiles de las escuelas para que se puedan usar después de la escuela y durante las vacaciones
97	Need____ Poss_____	Have more public restrooms and drinking fountains in parks/Tener mas baños públicos y bebederos de agua en los parques
98	Need____ Poss_____	Have emergency telephones in the parks and in the neighborhood/Tener teléfonos de emergencia en los parques y en el vecindario
99	Need____ Poss_____	Support having 'mobile playgrounds,' a semi-truck of toys that can be taken to different places/Apoyar los parques infantiles móviles, que son una troca o camión con juguetes que se pueden llevar a diferentes lugares
100	Need____ Poss_____	Get a group of kids together to organize and advertise youth events (with flyers or word-of-mouth)/ Formar un grupo de niños para organizar y anunciar eventos (con panfletos y hablando con la gente)
101	Yes____ No_____	Our final question is, can we contact you to share the results of this project with you? /Nuestra ultima pregunta es: podemos contactarla para darle los resultados de este proyecto?

Appendix 6: Community Fair Flyers

GET OUTDOORS COLORADO
Celebrates 2012 National Get Outdoors Day
Saturday June 9, 2012
Time: 10:00am – 3:30pm
Location: Denver City Park
E. 17th Ave. and Colorado Blvd., Denver CO
FREE!
A fun, free, active day with a zillion things for everyone to do!
Rock wall climbing, kayaking, live music, Junior Ranger activities, dancing, outdoor arts, fishing, yummy foods, bicycling, hula hooping, Zumba, canoeing, and many more fun outdoor activities to experience!
Like us on Facebook* to get all the activity experience updates or visit:
GetOutdoorsColorado.org
*FACEBOOK SEARCH: Get Outdoors Colorado
Filling the communities' thirst for a fun, safe, and educational outdoor experience.
All are welcome to join! Get outside and play!
A Project of the Colorado Non-Profit Development Center
design & photos: InkLoungeCreative.com


Child and Family
Community Resource Day
Behavioral Healthcare, Inc. (BHI) is hosting a Child and Family Community Resource Day for the public. This FREE EVENT is sponsored by Aurora Youth Options and Taking Neighborhood Health to Heart. Bring the family and learn about fun, safe, free, and low-cost resources available in the metro area. Activities for the kids, door prizes, and refreshments provided!
LOCATION
Martin Luther King Jr. Library
9898 East Colfax Avenue
Aurora, Colorado 80010
DATE
Saturday, August 4, 2012
WHO
Everyone is welcome so bring the entire family!
TIME
1:30pm - 4:30pm
Behavioral HEALTHCARE
AYO
Aurora Youth Options
Contact Izzy Nix at (720) 490 - 4472 for more information.

Behavioral Healthcare, Inc.

Behavioral Healthcare, Inc. (BHI) seeks to provide a continuum of behavioral health services that demonstrate a commitment to superior quality and respect for consumers and families. We promote recovery by focusing on the unique needs, strengths, and hopes of consumers and families.

Aurora Youth Options

Aurora Youth Options, a program of Aurora Mental Health Center, works with Middle and High School aged youth and their families to navigate, connect, and provide positive individualized resources to help youth thrive.

Taking Neighborhood Health to Heart

Society of the Youth is a project of Taking Neighborhood Health to Heart that serves the East Montclair, Northwest Aurora, Stapleton, and Park Hill neighborhoods.

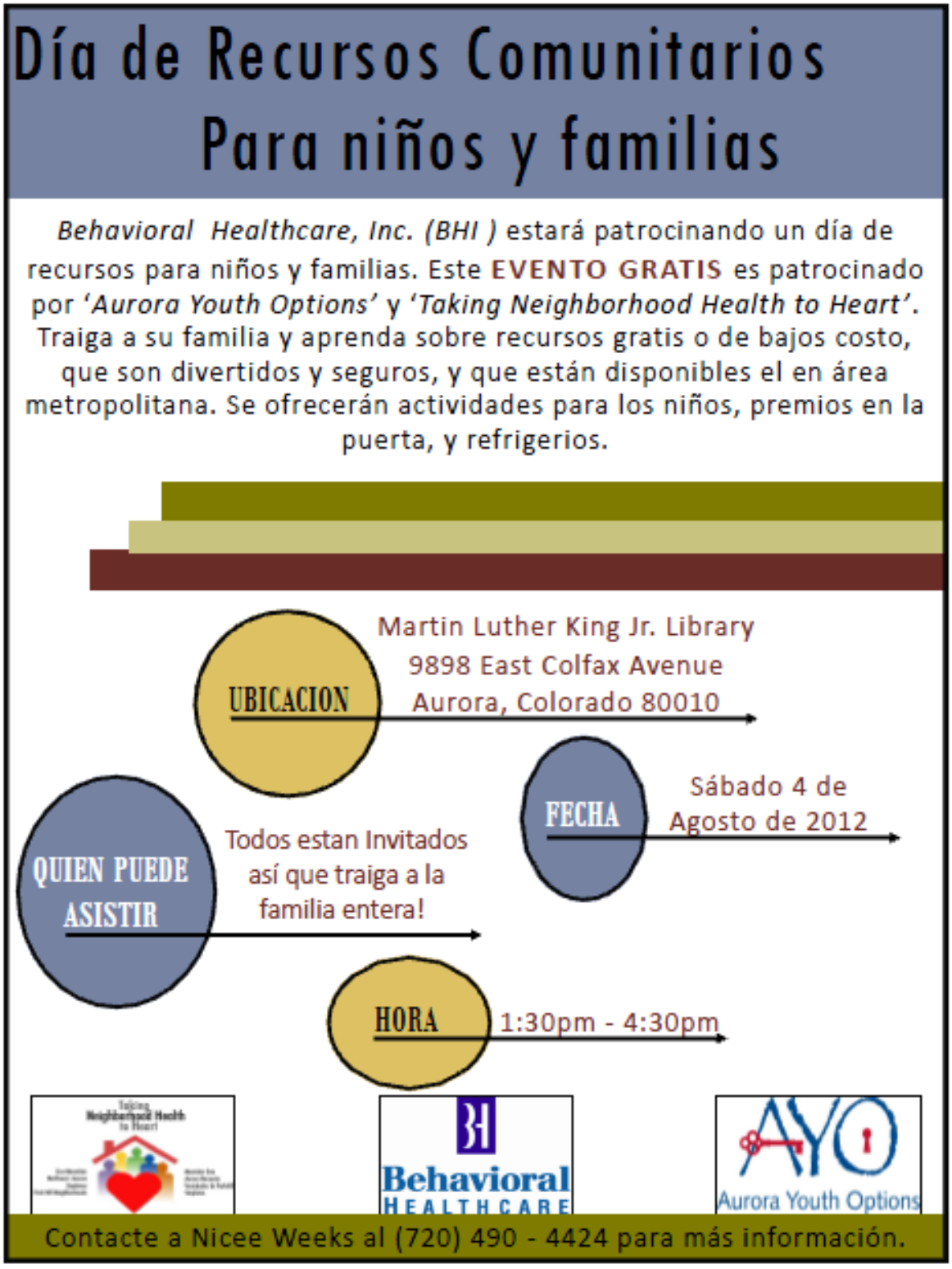
The RTD Routes 15, 15L, and 105 serve this location.
For more information call RTD at (303) 299 - 6000 or visit www.RTD-Denver.com

Directions from the North

Take I-25 S to I-270 E Aurora/Limon via exit 217B. Take exit 4 and keep left at the fork to merge onto Quebec St heading south. Turn left onto E Colfax Ave. Turn right onto Elmira St. Destination will be on the right.

Directions from the South

Take 1-25 N to I-225 N Aurora/Limon via exit 200. Take exit 9 and turn left onto CO-30/6th Ave heading west. Turn right onto Havana St. Turn left onto E 11th Ave. Turn right onto Elmira St. Destination will be on the left.


Día de Recursos Comunitarios
Para niños y familias
Behavioral Healthcare, Inc. (BHI) estará patrocinando un día de recursos para niños y familias. Este EVENTO GRATIS es patrocinado por 'Aurora Youth Options' y 'Taking Neighborhood Health to Heart'. Traiga a su familia y aprenda sobre recursos gratis o de bajos costo, que son divertidos y seguros, y que están disponibles el en área metropolitana. Se ofrecerán actividades para los niños, premios en la puerta, y refrigerios.
UBICACION
Martin Luther King Jr. Library
9898 East Colfax Avenue
Aurora, Colorado 80010
FECHA
Sábado 4 de Agosto de 2012
QUIEN PUEDE ASISTIR
Todos estan Invitados así que traiga a la familia entera!
HORA
1:30pm - 4:30pm
Behavioral HEALTHCARE
Aurora Youth Options
Contacte a Nicee Weeks al (720) 490 - 4424 para más información.

Behavioral Healthcare, Inc.

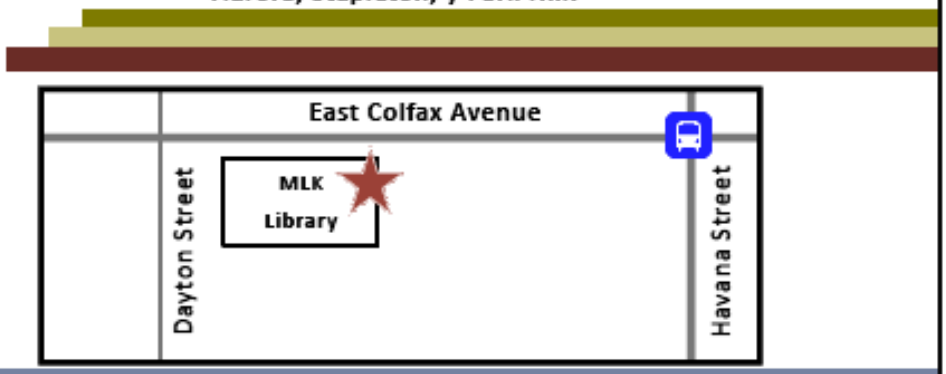
Behavioral Healthcare, Inc. (BHI) busca proveer servicios continuos de salud mental, demostrando un compromiso superior, calidad y respeto para los consumidores y sus familias. Promovemos la recuperación enfocándonos en las necesidades particulares, fortalezas, y esperanza de los consumidores y sus familias.

Aurora Youth Options

Aurora Youth Options, un programa de Aurora Mental Health Center, que trabaja con jóvenes entre las edades de la Escuela Elementaria y Superior (Middle and High School) en conjunto con sus familias, para navegar, conectar, y proveer recursos positivos individualizados que los ayuden a prosperar.

Taking Neighborhood Health to Heart

'Society of the Youth' (Sociedad de los jóvenes) es un proyecto de 'Taking Neighborhood Health to Heart' que sirve los vecindarios de East Montclair, Northwest Aurora, Stapleton, y Park Hill.



Las rutas del bus RTD 15, 15L, y 105 sirven esta ubicación.
Para más información, llame a RTD al (303) 299 - 6000 o visite www.RTD-Denver. com

Direcciones desde el Norte

Tome la I-25 S hacia la I-270 E Aurora/Limon via salida 217B. Tome la salida 4 y mantengase a la izquierda en el cruce, para salir a la calle Quebec hacia el sur. Tome la izquierda en E Colfax Ave. Tome la derecha en Elmira St. Su destino estara a la derecha.

Direcciones desde el Sur

Tome la I-25 N hacia la I-225 N Aurora/Limon via salida 200. Tome la salida 9 y gire a la izquierda hacia CO-30/6th Ave via al oeste (west). Tome la derecha hacia Havana St. Tome la izquierda hacia E 11th Ave. Tome la derecha en Elmira St. Su destino estara a la izquierda.

Appendix 7: Comprehensive List of Intervention Suggestions

1	Put restrictions on t.v.
2	Put teen mentors in the parks
3	Have 'Dance Dance Revolution' at schools
4	Have a low-income or free recreation center
5	Make a safe place for kids to go during breaks
6	Need transportation to safe places
7	Rotate transportation with other families
8	Address transients in abandoned homes
9	Provide homeless a homeless shelter
10	Use the park at Fitzsimmons
11	Get a place where infants can crawl over things in parks
12	Get a dog park
13	Build more walking paths nearby
14	Make more places to play basketball
15	Have cops do something about gangs
16	Have more recreation centers around the neighborhood
17	Have more commercials advertising kids to go outside and play
18	Have a petting zoo
19	Have a dog to walk or other animals to interact with
20	Have bikes and scooters we can ride for free
21	Have basketball tournaments, 3 on 3 basketball
22	Have restaurants by school so you can walk to them and get exercise
23	Make travel safer to parks
24	Have more social sport-oriented events
25	Have more competitions to motivate kids to be actives
26	Provide more security and protection for the kids and youth
27	Have adults pay more attention to their children
28	Entertain kids with anything- with wood or tiny cars- it doesn't take a lot of money
29	Have neighbors cooperate to take care of each other's children
30	More security so kids can feel good about being outside
31	Provide more games
32	Provide more physical activity
33	Provide more competitions running and jumping
34	Provide more interesting activites to involve the whole community
35	Have more activities with them (children)
36	Take them to the library
37	Children could do more sport activities
38	Create more sports and activities for kids
39	Divide schools into elementary, middle and high schools- not K-8
40	Get parents to want the children to be involved
41	Help make parents aware of what is available (for kids)
42	Get parents to patrol around the neighborhood
43	Have parents report license plates of people doing bad things- so people don't know who is reporting
44	More education, knowledge that 'this is YOUR community
45	Need more fathers in the home

46	Communicate and discipline youth to behave well
47	Have representatives talk at back-to-school night to tell parents about opportunities
48	Engage men in The Fatherhood Initiative
49	Vote to be sure programs are not cut from schools
50	Longer recesses- even if it extends the school day
51	Take back the parks
52	Get a group of people to commit to doing your daily activities and reporting bad activities to the police
53	Need number to report to the police and what to look for- look for the license plate
54	Need safe way for children to get from home to the recreation center
55	Train PTA members so they can report activity
56	Get active in your neighborhood and watch out for kids
57	Change the YMCA into a Boys and Girls Club
58	$10 sports clubs
59	Marital Arts or Kapoeira (Brazilian martial art)
60	Get donations from Chauncy or others to get a Boys and Girls Club
61	Security cameras need to go in around the recreation center
62	Put lights around the park at night- big bright lights
63	Put in new street lights
64	Get rid of unproductive businesses
65	Parents take children to the park
66	Make recreation center safe
67	Confront mentality that being an active participant is not being a snitch
68	Take kids out walking with lunches, hygiene kits to give to the homeless- kids contributing to the community
69	Parents volunteering
70	Take children to ski
71	Make skiing affordable
72	Make clubs, sports affordable
73	Have older kids help the younger kids
74	Have a closer amusement park
75	Improve the playground in the neighborhood, by adding more equipment for older kids, like a rock climbing wall
76	Improve the playground in the neighborhood, add an outdoor pool
77	Have a place to learn to cook or bake
78	Provide other classes teaching people sports
79	Provide other classes teaching people how to fix things
80	Offer yoga classesa
81	Need more stretching and warm up for sports
82	Have dancing (jerking?) competitions at school
83	Have a gym for dance competitions
84	Make a closer skating rink
85	Make more events, concerts
86	Make basketball tournaments
87	Give prizes to encourage physical activity
88	Give prizes like water bottles, ipods, cell phones, CDs, cash prizes, visa gift cards, gift cards to TARGET
89	Have a dodgeball tournament
90	Have a walk-a-thon

91	Plant trees and give prizes by the number of trees planed
92	Have a community history trivia contest
93	Have geogames (where people use a map and compass to find different “treasures”)
94	Have a family bike event
95	Give out prizes to places like ‘Jump Street’ a place with a lot of trampolines
96	Give out passes to ‘Jungle Quest’ a place with zip lines and other fun things for kids
97	Give out passes to Elitches
98	Give out Water World passes
99	Go sledding on the hill at City Park
100	Snowball fights should be encouraged
101	Tomato fights should be encouraged
102	Cheese rolling (rolling a huge wheel of cheese) should be encouraged
103	User flyers to organize people to go out and play
104	Have Chauncey Billups (a famous Denver basketball player) or other celebrities encourage people to get out and play
105	Use a sky writers (airplanes that tow signs) to advertise outdoor activities
106	Play leaf tag- where you use leaves to make a pac-man type route
107	Create life-size games of board games like Candy Land- maybe get in the Guiness Book of World Records for the largest board game
108	Go biking
109	Play in the sprinklers
110	Go to Congress Park pool
111	Make a huge pile of leaves to jump into with all the leaves collected from the leap drop
112	Encourage hiking in the mountains as a group
113	Have a bus to shuttle people to the mountains
114	Do a survivor show
115	Create a game of urban survivor
116	Plant more flowers and trees
117	Create more parks and open places to play
118	Have parks more isolated from traffic
119	Open the paddle boats in City Park more often
120	Go and observe the fish from the paddle boats
121	There could be a City Park scavenger hunt where you go to look for different things like pine cones and birds with your family
122	Have a kids’ obstacle course in the park
123	Make the zoo cheaper
124	Make the parks prettier with flowers and trees
125	Make playgrounds better with different equipment, like zip lines and more creative staff
126	Make playgrounds larger with more equipment
127	Put more swings in parks
128	Put in circular round-abouts (play equipment that is a tilted circle that you can run on)
129	Replace rusty equipment and repaint things
130	Put giant swings in a hexagon shape so everyone swings towards each other
131	Make physical education curriculum more fun
132	Have more playgrounds at the middle schools, not just basketball courts
133	Lower the price on trampolines
134	Have trampolines in public places that people can use for free
135	Set up more biking paths to places you want to go, like school and the mall
136	Set up different activities and stations in the park for the whole family

137	Have less homework on the weekends so children have more time to play
138	Every 20 minutes at school students should get up and walk or do some activity
139	Make sure students have recess
140	Need more space for kids to play at school
141	If you get into trouble at school, people should have to be active outside picking up trash instead of writing sentences
142	Go to summer camp
143	Go to art camp in the summer
144	Go swimming in the summer
145	Get a season pass to Water World
146	Free skiing offered in 5th grade- and it should be offered to more grades
147	Go for a field trip show shoeing, ice skating
148	Go to field trip to DU to do gymnastics, LaCross, ice skating and swimming
149	Take students on a camping trip
150	Take students on a canoeing trip
151	Take students on a backpacking trip
152	Take students on a snowboarding trip
153	Put drinking fountains along trails in the mountains
154	Put drinking fountains in the parks
155	Make more programs for kids to get out of the city and go for hikes
156	Have chaperones (adult volunteers) take kids out of the city
157	Need more safety, more security
158	Have parents go out with kids and watch over them
159	Kids could do activities like sports
160	Send kids to different schools so they are safe
161	Send kids to camps
162	Involve kids in Boy Scouts and Girl Scouts
163	Improve safety in parks
164	Improve safety in schools
165	Improve safety in recreation centers
166	Clean up the neighborhood
167	Instead of allowing bars and liquor stores, there should be recreation centers
168	Have kids get together, and have adults present with them
169	Parents should organize activities for their kids
170	When there are dangers, bad areas, you need to teach kids how to handle it or take safe route
171	Doesn't have to be planned, organized. Just have a place to play (school facilities), with light adult supervision
172	Have a parents' night out, using school grounds, facilities for kids to play; teachers volunteer to supervise
173	Have hopscotch, hula hoops, jump ropes, four square tournaments after school
174	Have free youth activity time at the rec centers, swimming, basketball
175	Need a place for the skateboarders/Se necesita un lugar para los patinadores (skateboarders)
176	Use school grounds, hoops, swings after hours/utilizar las escuelas, los aros y columpios después de escuela
177	Use the schools after hours/utilizar la escuela después de horas regulares
178	More resources for kids to participate/Mas recursos para que los niños participen
179	Have the government pay to let kids participate, basketball, summer camp/Que el gobierno page campamentos de verano o de baloncesto, para que los niños participen
180	Have more basketball courts/Tener más canchas de baloncesto
181	Have more playgrounds/Tener más patios de juego

182	Have more safety
183	Have more trails
184	Have more areas for bikes and skateboards
185	Have an urban skate park
186	Have more adults outside to create safety
187	Need more crosswalks
188	Need fences to keep kids from running in streets
189	Have emergency telephones in the parks and in the neighborhood
190	Have music and more affordable extracurricular activities
191	Need less expensive instruments, uniforms, equipment
192	Parents go outside and play with the kids, make it a family thing
193	Play soccer
194	Play tag
195	Have music, block parties
196	Put up flyers for a flag football game and food and drink at the park, kids would come
197	Have snowball fights
198	Have snowman building competition
199	Organize outdoor free movies with physical activity before the movie starts
200	Dance
201	Jump rope
202	Hang out
203	Party
204	Go Walking
205	Put in Basketball hoops, courts in the park at 17th & Montview
206	Upgrade the playground
207	Build tennis court
208	Make track field, baseball & football field improvements
209	Have a recreation center with free activities
210	Help the homeless
211	Have incentives for sports events with incentives: laptops, iPods
212	Have free classes: music, dance lessons, free gym, yoga, pilates, tae kwan do
213	Make police visible so gangs go away
214	Need positive male role models
215	Need more mentors
216	Need cheaper organized sports
217	Reduce costs of recreation centers
218	Curfew laws should be enforced
219	Neighborhood watch would be good; people will talk to police
220	Traffic bumps to slow traffic
221	Enforcement of stop signs
222	Police should be out in the neighborhood where they can be seen
223	Have more friendly kids (to get kids outside)
224	Have fewer not-nice kids around
225	More playground equipment
226	Need “responsible” parents in the park to watch over kids
227	People should take responsibility for themselves
228	Fence around the playground area
229	Make police more visible- it would change a lot quickly

230	Youth need something positive to do, a program to clean up neighborhood, help the elderly, make them feel worthwhile, like they have a purpose, like they count
231	Have community gathering for youth, feed them, and show them that you're willing to do something for them
232	Let youth know they can make a difference, like one Saturday a month
233	Pay kids to help in the neighborhood; prizes
234	Create a program "Hip Help" where youth help elderly and get a prize like all school supplies and clothes for next school year
235	Walk around the neighborhood
236	Need a recreation center to hang out with friends
237	Have more security to proect against having property, like bikes, stolen
238	Take children to the park to avoid traffic
239	Reduce sport prices, especially for families with multiple kids
240	Make anonymous reporting of crime- and let people know it is legitimate
241	Everyone put on porch lights
242	Teach children to ski
243	Increase physical activity in K-8 schools- in everyday curriculum and field trips
244	Get signs in parks that say no smoking for the health of kids
245	Have kid-friendly events in the park- ask kids what they want
246	Get a group of kids together to advertise youth events (with flyers or word-of-mouth)
247	Get kids together to feed the homeless
248	Get kids togheter to have a roller-fest (include skates, skateboards, bikes)
249	Have competitions with prizes to get kids interested
250	Ask kids what they want to see or participate in with a friend
251	Have children play sports at school
252	Have a football field close to home
253	Have a volleyball court close to home
254	Have adults teach kids how to play sports
255	Parents need to put energy into getting kids active, making them do it even if they don't want to
256	Elementary school needs more organized sports
257	Have neighbors that you like, neighbors who are active
258	Have more sports and fewer video games
259	Have a schedule where kids and parents exercise together, like jumping jacks, crunches, stretches
260	Dance in class or at school
261	Have a tetherball court
262	Have a dodge ball tournament in a park
263	Have schools host a dodgeball tournament with incentives to encourage people to come
264	Go to Waterworld and get exercise by going to different rides
265	Plant more trees next to raods around parks to protect kids from traffic
266	Clean up the pollution and litter in parks
267	Improve the school grounds
268	More families shouls have things like trampolines to be active
269	Have bungee jumping
270	Give kids more education about physical activity and nutrition
271	Keep the attitude that kindergartners have in the playground, no matter how old you are
272	Have kids involved with after-school activities because they are safe
273	Have faster police response times
274	Don't over-schedule kids

275	Help people distinguish between real and perceived safety risks
276	Give kids freedom to be outside and let them know not to talk to stranger
277	Have better, more interactive teachers
278	Have better parents being role models
279	Teachers should give less work so students have more time to do activities
280	Need to add music back into schools
281	Add in more extra-curricular activities
282	Have activities like music to draw people out
283	Have parents volunteer to staff the school playground after school
284	Have more kids walk or bike to school
285	Protect children from traffic
286	Create a way to get kids safely through traffic when they bike or walk to school
287	Need people to be present in the neighborhoods
288	Participate in neighborhood watch programs and teach kids about stanger dangers
289	People need to be more active and involved
290	There has to be a critical mass of kids out for them to get together
291	Have older youth watch younger kids in the parks, maybe for their school service requirement
292	Look at pre-programmed activities, clubs like tennis after school that can be free
293	Have block captains encourage interactions- maybe athey could organize a group activity every 3 weeks, or block parties so people get to know each other
294	Need to train or educate adults to facilitate youth physical activities
295	Have youth supervise youth in schools as parent helpers
296	Go to the recreation centers, they provide plenty of activities
297	If girls are not in sports they need to have parents schedule things for them to do
298	Open/unlock tennis courts for things like roller-skating
299	Better utilize existing school facilities- keep them open during after-school hours and the summer
300	Need parents who have time to take them out, non-working parents
301	Go to after-school enrichment programs and get scholarships to go
302	Have Wii's for kids in the homes
303	Have kids play in the backyard with a trampoline or basketball
304	Jump rope at home
305	Be outside building forts
306	Sled on snowy days at the park
307	Need kids to have free time together and live close to together
308	Teach kids about lifestle fitness (walking to school, the grocery, walking the dog)- instead of sports fitness
309	Send kids to the store to get milk
310	Parents ride bikes with kids, have a family ride, go get ice-cream
311	Give money to schools to supervise kids after school - enrichment activities and physical activity, especially for girls
312	School playgrounds should be unlocked so they can be used after school hours
313	Have snacks to encourage people to come together and be active
314	Once a month- have groups that go hiking, camping, whitewater rafting, horseback riding
315	Have a bus to take kids skiing, camping, rock climbing, fishing, hiking
316	Give youth a purpose and let them know they count- make them feel worthwhile
317	Figure out how to have youth have good feeligns doing things for others
318	Have youth do things for others- one Saturday a month
319	Thank youth for their contribution by giving them a meal and making them know they make a difference

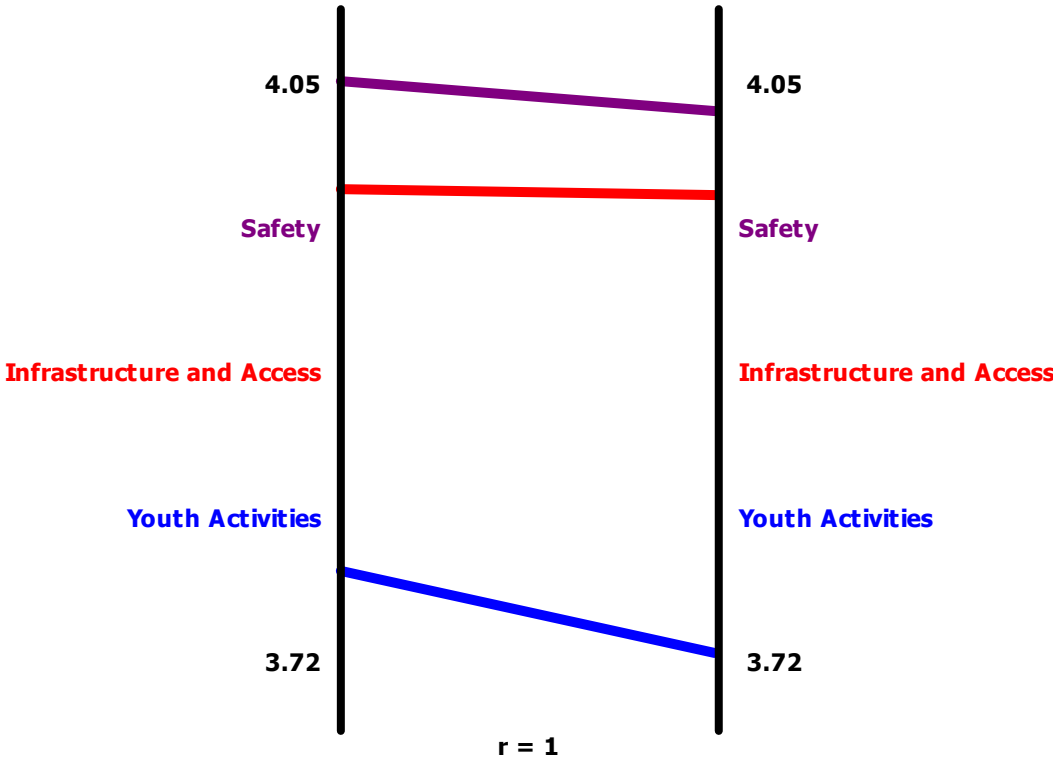
320	Create monthly birthday celebrations for kids that involves physical activity
321	Keep your eye out to witness and keep the neighborhood safe for children
322	Provide a mulit-sport facility where children can participate in tournaments, sports camps- like the Gold Crown that has facilities for golf, basketball, computers, volleyball, soccer, football
323	Have teens help elderly in the neighborhood for a stipend
324	Throw community events
325	Have open houses at existing facilities, like the Gold Center
326	Add more security cameras
327	Make clean places to play
328	Make available free or rentable sports or activity equipment
329	Support having ‘mobile playgrounds,’ a semi-truck of toys that can be taken to different places
330	Have more public restrooms in parks

Appendix 8: Pattern Match:

Similar Ratings among Context 2 and Context 3 Adults

The pattern match, displayed in the ladder diagram below shows intervention ratings among adults in context 2 on the left and ratings among adults in context 3 are shown on the right. These results show the participants in these two clusters rated intervention cluster needs identically and these groups were combined.

Pattern match with all adults context 2 on left and context 3 on right



Thus the combined ratings from adults in clusters 2 and 3 are shown in the cluster rating maps.

Appendix 9: Community Feedback Presentation

2040 PARTNERS FOR HEALTH

NEIGHBORHOOD HEALTH SUMMIT

Health Care Reform & Beyond in our Communities

You are invited...

Join your neighbors to learn and share ideas for how to improve health and health care in our five neighborhoods (NW Aurora, East Montclair, Stapleton, Park Hill, NE Park Hill).

Make your voice heard about how you want health care to work for you.

Meet the organizations working in our neighborhood to improve health and health equity over a free networking lunch.

Saturday, February 5, 2011

8:30 a.m. – 2:30 p.m.
Johnson and Wales University
Jared Polis Auditorium
7150 Montview Blvd, Denver CO
FREE ADMISSION AND LUNCH

Guest Speaker
Lorez Meinhold
State of Colorado
Director of Health Reform Implementation

Keynote Speaker
Regina M. Benjamin, M.D., M.B.A.
U.S. Surgeon General

Morning

- Learn about health programs going on in our neighborhood, including the results of the Childhood Obesity Study.
- Explore what health care reform will mean to you, your family and our neighborhood, and how you can influence it.
- Talk with neighbors about community priorities and concerns based on what you hear at the event.

Afternoon

- Hear the Surgeon General of the United States talk about national health priorities and the importance of community involvement.

RSVP by January 28th

Space is limited, so please RSVP to summit@2040health.org or 303.468.3241 with the following information:

- Name
- Organization (if any)
- Phone number
- E-mail
- Neighborhood you live in

Limited childcare available for children ages 5 and up. Please include number and ages of children when you RSVP. If Spanish translation is required please include this information with your RSVP.

Generously supported by

THE COLORADO TRUST

University of Colorado Denver Department of Family Medicine

STARBUCKS COFFEE

JOHNSON & WALES UNIVERSITY DENVER CAMPUS

CHIPOTLE MEXICAN GRILL

MAD greens inspired eats

Thank you

We would like to recognize the support of community individuals and groups including Taking Neighborhood Health to Heart, the *be well* Initiative of The Stapleton Foundation, and all of our neighborhood organizations.

2040 PARTNERS FOR HEALTH
7350 E. 29th Ave
Suite 300
Denver, CO 80238
P. 303.468.3241
E: summit@2040health.org
www.2040partnersforhealth.org

The Society of The Youth

A Project of Taking Neighborhood Health to Heart

Solutions for Getting Youth Active in Our Neighborhoods

Presenter:
Stephanie L. Phibbs, MPH
University of Colorado, Denver

Community-Based Participatory Research (CBPR) Effort

- CBPR is a way for community members and researchers to learn together and contribute equally to a project
- When communities shape research they can own and act on the results

Academic Partners

Stephanie L. Phibbs, MPH
Rebecca Slaughter, Student Intern
Deborah S. Main, PhD

Department of Health and Behavioral Sciences
University of Colorado, Denver

Neighborhood Partners

Youth
- Lissette Acevedo
- Daniel Armijo
- Lavaris Billingsley
- Chris Brooks
- Jalil Jefferson
- Alandra Ibarra
- Jesus Ibarra

Adults
- Teresa Acevedo
- Lashonn Billingsley
- Olga Martinez
- Carmen Miranda
- Cat Santos
- Francisco Subiadur

Two Aims

- Aim 1: Identify different neighborhood safety environments using data collected by Taking Neighborhood Health to Heart
- Aim 2: Work with neighbors to find solutions for increasing physical activity among 10-14 year old youth

Aim 1: How We Did It

Analyzed data to identify safety environments using the Taking Neighborhood Health to Heart data:

Household survey measures: discrimination, social cohesion, perception of traffic safety, perception of personal safety,

Audit data: neighborhood incivilities, e.g., graffiti

Aim 1: What We Learned

- We identified three different safety environments within the five neighborhoods
- Advisory Committee members did not want to present these data as a map because it could stigmatize neighborhoods
- Data were used to be sure equal numbers of people from each safety environment were involved in Aim 2

Aim 2- How We Worked with Neighbors to Identify Solutions

- Formed a Community Advisory Committee in early 2009
- Used "Concept Mapping" to identify solutions,

"Concept mapping is a method that can help communities develop locally relevant interventions..."

Concept Mapping Process

- Trained and hired community facilitators
- Selected a question:

  "What changes would you like to see to increase physical activity among 10-14 year old youth in your neighborhood?"
- Neighbors brainstormed 300 solutions
- We reduced the 300 solutions to 100 solutions
- Neighbors sorted the 100 solutions

Concept Mapping Process

- Recruited equal numbers of neighbors from each of the three safety environments (30 adults and 10 youth aged 10-14)
- Participants rated solutions (How needed? How possible?)
- Analyzed data with Community Advisory Committee
- Now sharing results with the, you, the community

Youth Engagement

- Meeting monthly
- Youth named the group
- Created a vision and art work
- Received an introduction to advocacy
- Run some meetings
- Excited to present the results you will see today

Community Partner Thoughts

"I'm very proud of what is going on."

"..the whole purpose is to find something that they (youth) want so that they can become more physically active and if they put their ideals into it and they create it, then they'll participate in it."

More Community Thoughts

"I think the program is great because it allows community members, people who may never show up at other places or other meetings to voice their opinions about what they want for their kids or the youth in the community."

Aim 2: What we Learned

- Youth in different safety environments had similar ideas about what was needed
- The Advisory Committee decided to focus on what the youth said was needed
- The Advisory Committee decided to take into account what adults thought was possible

TOP SOLUTIONS:

Safe

Have "responsible" parents and adults in the park and neighborhoods to watch over kids

Free

- **Have a recreation center with free activities**
- **Make available free or reduced price rentable sports or activity equipment**
- **Unlock school playgrounds so they can be used after school hours and during breaks**

Fun

- Make playgrounds better with different equipment, like zip lines and more creative stuff
- Have kids do activities like sports
- Give prizes to encourage physical activity

Health Strikes Back!

Safe, Free and Fun

(A youth-adult partnership skit)

MAKE IT SAFE

One quarter of 10-14 year-old youth agree:

Not feeling safe keeps me from playing outdoors

Data from the Kids' Study

One-third of parents say:

I worry that my child will be hurt by other children if he/she plays outside

One-half of parents say:

I worry that my child will be hurt by gangs if he/she plays outside

Data from the Kids' Study

MAKE IT FREE

Of the 10-14 Year-olds in our Neighborhoods, less than half:

used the recreation center last week

participated in after-school sports or dance programs run by the school

Data from the Kids' Study

MAKE IT FUN

TOP SOLUTIONS:

Safe

Have "responsible" parents and adults in the park and neighborhoods to watch over kids

Free

- **Have a recreation center with free activities**
- **Make available free or reduced price rentable sports or activity equipment**
- **Unlock school playgrounds so they can be used after school hours and during breaks**

Fun

- Make playgrounds better with different equipment, like zip lines and more creative stuff
- Have kids do activities like sports
- Give prizes to encourage physical activity

Play Participants

Actors/Actresses
Lissette Acevedo
Daniel Armijo
Lamar Billingsley
Lavaris Billingsley
Chris Brooks
Jalil Jefferson
Alandra Ibarra
Jesus Ibarra
Erika Solis

Narrarators:
Daniel Armijo
Rebecca Slaughter

Director
Sam Wood

Acknowledgements

- 2040 Partners for Health for the invitation to present to you here today!
- Principle Investigators Ira Gorman and Debbi Main; Taking Neighborhood Health to Heart; 2040 Partners for Health; The Colorado Health Foundation
- Heather Kennedy for youth engagement consultation
- Sam Wood and Erika Solis from Kaiser Permanente's Teens Take it On Program- thank you for directing the play!!! They are a youth-adult partnership that has brought healthy school lunches to 184,000 students!

Acknowledgements

- Community residents who participated in this study and Advisory Committee
- Translators/Interpreters: Silvia Gutierrez Raghunath, Andrea Clinger, Rosario Montoya
- Study recruiters: Michael Garcia, Kate Walker, Rosario Montoya
- This study was funded by an Active Living Research Program grant from The Robert Wood Johnson Foundation

Audience Participation

Which would be the best thing to do to get youth 10-14 years old more physically active in our neighborhoods?

1. Make the neighborhoods safe
2. Make things free
3. Make things more fun

Audience Participation

Which would you say you are?

1. A youth 10-24 years old
2. An adult who mostly speaks English
3. An adult who mostly speaks Spanish

Join Us for Breakout Groups!

Later today we will get in break-out groups

We invite you to join in the groups to talk about making things safe, free and fun in our neighborhoods

Small Group Discussion Questions

- Did anything surprise you about the safe, free and fun results? (have slide with all solutions)
- What do you think it would take to make this happen?
- Who should be involved?
- What are the next steps?
- Would you like to be involved?
- Next meeting SOY date, time

Narrators' Script: Fun, Free and Safe (a.k.a. Health Strikes BACK(!)

By: Rebecca Slaughter/Daniel Armijo

Scene 1: Outside of the rec. center on a weekend morning. After they get the ball from the rec. they proceed outdoors. As one attempts to make a shot a bully comes out of left, and snatches the rebound. (Bully) (Kids)

- "Whad up B?! This yo basketball?"
- "Yeah man, it's my ball."
- "Not anymore it's not!"

The bully proceeds to get a friend and play monkey in the middle with the ball. While doing so, he is teasing the original kid that had the ball.

- "Hey! Give me my ball back! …NOW"
- "Get your own! This court's not big enough for all of us!"

End Scene…

Scene 2: Another day at the same rec. center the children try to play again, but this time they are accompanied by their parents. With all of the confidence in the world they rent another basketball, and proceed outside.

- "Let's play!"
- "Na man, remember what happened last time?"
- "Yeah, just forget about it, let's go play."

In the center of the basketball court, they see the same bullies. Fortunately, before the bullies have a chance to wreak havoc they see the parents and kick dirt.

End Scene…

Scene 3: A group of kids walk to the rec. center in hopes to play some ball. As they walk past the sign of admission they try to get in, but the guy points at the sign. They pull out their pockets and find that their broke! (Worker) (Kid)

- "Hey man, didn't you see the sign?"
- "What sign?"
- "The one that says you can't get in for free."

As he points at the sign that says 3$, the kids have a very saddened look in their eyes. So they walk back home.
End Scene…

Scene 4: Same scene, different sign. This sign says free day! (There will be more kids in this scene because it's free!)

- "Hey man, didn't you see the sign?"
- "What sign?"
- "The one that says FREE DAY!"
- "A lot of yeah's and screaming!"

End Scene…

Scene 5: The kids are at the park, standing…bored. So they walk back home with nothing to do. (Kids)

- "Man, I'm just so bored!"
- "Me too! This sucks…"

End scene…

Scene 6: We're at the park and now it has lots of cool things to play on…

- "Hey, look at all the fun stuff to do!"
- "Yeah let's play!."

The kids go crazy with all of the stuff to play on.
End Scene…

Scene 7: Kids walk to the school playground that is locked. They walk up and hold the lock and look sad saying

- Man this sucks- I wish we could get in there to play
- Yeah this is a bummer
-

Scene 8: Kids walk to school playground that is unlocked and they run in and start playing, then say

- It is great we can get in here to play
- Yeah good thing we worked with the schools to get this unlocked

Appendix 10: Physical Education Policy Brief

Physical Education in Colorado Schools

Background
The Colorado State Legislature is currently considering legislation related to physical activity requirements in schools.

What the Research Shows
- In Colorado, 57.1 percent of school-age children participated in vigorous physical activity for four or more days per week, ranking 37th of all states in United States [i]
- A study of local school wellness policies from districts in lower-income, rural Colorado communities found that ratings of policy strength ranged on average from 3 to 31 on a scale of 1 (weakest) to 100 (strongest). Physical education guidelines had the weakest rating of 3 on average." [ii, iii]
- Research suggests physical education does not diminish school academic performance. [iv] [v]
- Neighborhood safety may limit opportunities for outdoor play among the youth at highest risk for obesity. [vi]

Why does this matter?
- A 2008 report from The Colorado Health Foundation cited obesity-related medical expenditures cost Colorado $874 million annually.[7]
- Though Colorado is the leanest state in the nation, childhood obesity in Colorado increased 23 percent between 2003 and 2007 – the second-fastest rate of increase in the nation behind Nevada.[8]
- In 2005-2007 an estimated 14 percent of Colorado children ages 2-14 were considered obese. The *Healthy People 2010* objectives call for no more than 5 percent of children and adolescents to be overweight.[8]
- Highest rates of obesity among 2-14 year olds are seen in Hispanic (24%), followed by black (18%), Asian (12%) and white children (11%)[8]

Policy Implications
- requiring physical activity in schools will improve the health outcomes in children without diminishing academic performance;
- physical education curricula should adhere to evidence-based curricula encouraging maximal physical activity;
- offer regular professional development opportunities to physical education teachers which are specific to the field and require teachers to keep aware of emerging technologies, model programs, and improved teaching methods; [x]
- require that students are active in moderate-vigorous physical activity for at least 50% of class time; [x]

What do Coloradoans Think?
- 95% of Colorado parents of school children support or strongly support having recommended levels of PE in schools [xi]
- In a recent survey where representative adult and youth residents in 5 neighborhoods from Denver and Aurora were asked to rate 100 solutions for increasing youth physical activity, residents said voting to be sure physical education is not cut from schools received the highest rating.[vi]

Conclusion

Colorado has enjoyed its status as one of the leanest state in the nation for some time, but with the fastest rise in obesity rates among children in the nation, our trajectory is clear and expensive. Physical education is a recommended strategy for improving youth physical activity, will not likely diminish test scores and may be especially necessary for children living in neighborhoods that are unsafe for afterschool outdoor activity.

[i] The Colorado Health Foundation, The Colorado Health Report Card 2008. Accessed 2/25/11: http://www.coloradohealthreportcard.org/ReportCard/2008/subdefault.aspx?id=3302

[ii] Belansky E, Cutforth N, Delong E, et al. "Early Impact of the Federally Mandated Local Wellness Policy on Physical 1 Activity in Rural, Low Income Elementary Schools in Colorado." *Journal of Public Health Policy*, 30(1): S141-S160, January 2009

[iii] Local School Wellness Policies: How Are Schools Implementing the Congressional Mandate? Robert Wood Johnson Foundation Policy Brief 2009. http://www.yaleruddcenter.org/resources/upload/docs/what/reports/RWJFBriefLocalSchoolWellnessPolicies2009.pdf

[iv] Sallis, JF, McKenzie, TL, Kolody, B., Lewis, M., Marshall, S., Rosengard P. Effects of Health-Related Physical Education on Academic Achievement: SPARK. Research Quarterly for Exercise and Sport. 1999. Vol. 70, No.2, pp. 127-134.

[v] Coe DP, Pivarnik JM, Womack CJ, Reeves MJ, Malina RM. Effect of physical education and activity levels on academic achievement in children. *Medicine and Science in Sports and Exercise*. Vol. 38, No. 8, 1515-1519, 2006.

[vi] Phibbs, S, Main D. Solutions for increasing physical activity in diverse safety contexts, doctoral dissertation, unpublished. 2011

[vii] The Colorado Health Foundation, Income Education and Obesity A Closer Look at Inequities in Colorado's Obesity Problem. 2008 Supplement to the Colorado Health Report Card, 2008. Accessed 2/25/11: http://www.coloradohealthreportcard.org/ReportCard/2008/subdefault.aspx?id=3302

[viii] Colorado Children's Campaign. 2010 KIDS COUNT in Colorado, http://www.coloradokids.org/facts/kids_count/publications.html accessed February 25, 2011.

[x] American Heart Association. Physical Education in Schools – Both Quality and Quantity are Important. http://www.americanheart.org/downloadable/heart/1204662840069Policy%20Position%20Statement%20on%20Physical%20Education%20in%20Schools.pdf Accessed 2/25/11.

[xi] Colorado Child Health Survey 2006, cited in https://www.livewellcolorado.org/assets/pdf/resources/fact-sheets/cdphe-child-obesity-factsheet-revised09.pdf